

Speed Management Strategy

November 2020



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Section 1: Executive Summary

Hertfordshire has developed a Speed Management Strategy to enable clear and transparent decision making around the setting and application of speed limits in the county. Whilst DfT Circular 01/2013 *Setting Local Speed Limits* provides guidance on appropriate environments for different types of limit, this is open to some interpretation and therefore can potentially lead to inconsistencies in approach. A Hertfordshire based strategy with a framework setting out the requirements for different limits and a process for implementing them removes this ambiguity and will ensure that a consistent approach to speed limit setting is followed across the county.

This document therefore presents the strategy and process for setting speed limits in Hertfordshire. It also provides information on the measures which can be used to support speed limits including traffic calming measures, camera technology and the role of education, training, publicity and enforcement and in doing so helps set out what might need to be considered to ensure speed limit compliance

This document is an update of the previous strategy adopted in 2014 and reflects changes in regulation, guidance and policy since then. A key change is the adoption of Hertfordshire's Local Transport Plan 4 which places much greater emphasis on the consideration of the needs of vulnerable road users such as pedestrians and cyclists. In order to support this the County Council has also adopted a place and movement approach which takes account of the varying functions and uses of its roads and categorises them based on whether they are places people want to visit or whether they are primarily focussed on vehicle movement. This helps identify locations which may be suitable for the application of lower speed limits.

We know from experience that in Hertfordshire where the wrong limits are applied to a road they are generally ignored. This means that safety is compromised by drivers failing to comply as walkers and cyclists may be given a false sense of security. Therefore, it is important that we follow a considered approach using design to encourage self-compliance where possible. This is also the key principle in national guidance (DfT Circular 01/2013 *Setting Local Speed Limits*).

The key aim of the strategy is therefore as follows:

- To ensure the speed limit for any road is in keeping with its environment.
- This is underpinned by 5 core principles:
- We will encourage speed limit changes that support active travel (walking and cycling)
- In some cases (where appropriate) we will lower speed limits
- In some cases (where appropriate) we will need to change the design of a road to change behaviour
- We won't put up speed limit signs alone and expect a significant behaviour change

In some cases (where we establish that speed limits are too low for the environment) we may need to raise speed limits

The strategy includes a framework which sets out criteria for setting different speed limits. This follows guidance given in DfT Circular 01/200113 setting out the types of environment which may be appropriate for different limits and applies this to the Hertfordshire context making use of the place and movement approach.

The DfT guidance states that existing mean speeds should be used as the basis for determining local speed limits and the framework sets out the speed ranges appropriate for different limits. Technical guidance on the measurement of speed limits is given in the appendices.

The new strategy recognises the importance of encouraging active travel (cycling and walking) in our towns and villages in line with LTP4 and the strong public desire for implementation of 20mph speed limits over wider areas. Our framework provides a means of identifying areas suitable for 20mph using the place and movement approach, a consideration of the local road environment and existing speed measurements. Where existing speeds are 24mph or lower than the area is likely to be suitable for a 20mph limit with signage alone. Where speeds are above 24mph additional measures will be required to lower speeds. Roads with existing speeds above 30mph are unlikely to be suitable for 20mph.

The strategy supports the introduction of advisory 20mph outside schools where the environment is suitable and states that 20mph should be assumed where new schools are proposed or where significant changes are made to existing school facilities. It also recommends that the physical design of any new residential developments should naturally encourage motorists to drive at 20mph or less.

The document identifies physical engineering measures which have the potential to significantly change vehicle speed and gives guidance on where these may be appropriate in [Appendix K](#).

The role of technology to help manage speed is covered in the document. Speed Indicator Devices (SIDs) are informational signs rather than being linked to enforcement and are used to remind drivers about speed limits. They can have a role in modifying behaviour on 20 - 40mph roads where recorded speeds are over the limit by set margins. The document sets out a range of locational criteria which need to be followed to ensure that the devices operate effectively and safely.

Camera technology includes core safety camera sites. The primary objective for these is to reduce deaths, injury and health loss resulting from road collisions through enforcing the speed of traffic and reducing red light running. Stringent criteria are used for the selection of these sites based on the number of people killed or seriously injured at the site. These are funded through the Safety Camera Partnership.

Other types of camera are funded from a variety of other sources and their deployment is based on other criteria. These include cameras at sites where there are concerns from the local community or police over traffic speeds, but which don't necessarily have an associated collision record. Funding for these is typically provided through the Office of Police and Crime Commissioner (OPCC). Other sites for camera deployment include traffic management sites (associated with roadworks) or event-based sites (covering locations where significant offending takes place). The strategy also recognises the potential for average speed cameras on certain types of roads.

Education, training and publicity are tools for encouraging compliance with speed limits. The county council as part of the Hertfordshire Road Safety Partnership delivers a range of educational programmes for road users including the Learn2Live programme for young people, the National Driver Offender Retraining Scheme (NDORS) (which is used as an alternative to punishment for low level speeding and other driving offences) and targeted publicity campaigns.

Finally, the document clarifies the role of the police in speed enforcement and the process to be followed with requests for changing speed limits including the role of the Speed Management Group in checking the requests against the framework.

Section 2: Introduction

2.1 What is the Speed Management Strategy?

The Speed Management Strategy (SMS) is a supporting document to the fourth Local Transport Plan, LTP4

The overall purpose of the SMS is to establish a consistent approach to the setting of speed limits based on the function and nature of the route as set out in DfT Circular 01/2013 *Setting Local Speed Limits*

The county council, as highway authority, and police, as enforcement authority, receive many requests regarding speed management and compliance. These can be addressed through a number of tools:

- Engineering and design measures;
- Education, training, and publicity;
- Behaviour change initiatives such as fixed or mobile community Drivesafe schemes;
- Speed Indicator Devices (SIDs)
- Camera based technology
- Speed enforcement

The strategy acknowledges these tools and provides:

- Consistency in setting speed limits based on the function and nature of the road and area.
- Consistency in the implementation of speed management and traffic calming features
- Consistency in the selection of safety camera sites.
- Clarification of the role of the police and county council in relation to setting speed limits and undertaking enforcement.
- Information on how the Office of the Police and Crime Commissioner (OPCC) Road Safety Fund can be used to address community concerns relating to traffic speeds.
- Information on education and publicity programmes.

2.2 Who is the strategy for?

The strategy is intended to be read and used by:

- Hertfordshire County Council officers,
- Officers or consultants with a professional interest in speed management,
- Elected county councillors,
- Hertfordshire Constabulary,

- Other stakeholders, such as developers of new roads, and
- Members of the public

As a predominantly technical document, it is recognised not all users will be comfortable with certain terms and concepts. Appendix A contains a glossary of traffic management terminology and Appendix I contains frequently asked questions that may help understanding.

2.3 Who is responsible for the strategy?

Hertfordshire County Council serve as the highway authority (Highways Act, 1980) and the traffic authority (Traffic Management Act, 2004) and is therefore responsible for the management of speed on most public roads in Hertfordshire. The primary exceptions are motorways and trunk roads, which are managed by Highways England.

The county council are also a relevant authority under the Road Traffic Act, 1988 and have certain responsibilities towards road safety that may extend to the amendment or management of speed limits.

The Chief Constable of Hertfordshire is responsible for the direction and control of officers and staff who are members of the constabulary, known as the enforcement authority within this document.

The Strategy supports the work of the multi-agency Hertfordshire Road Safety Partnership and contributes to delivering a coordinated safe systems approach to road safety as detailed in Hertfordshire's Road Safety Strategy and the Department for Transport's Road Safety Statement 2019 (A Lifetime of Road Safety)

2.4 What has changed in this version of the strategy?

The previous SMS was adopted in 2014, and there have been changes at both a local and national level since then. These include but are not limited to:

- The county council adopting LTP4 in May 2018, establishing transport objectives and policies through to 2031.
- The introduction of the Office of Police and Crime Commissioners (OPCC) Road Safety Fund, a source of potential funding for any organisation that can contribute to improving road safety across the county.
- The county council adopting the principles of Place and Movement approach for road categorisation.
- The publication of the revised Traffic Signs Regulations and General Directions (TSRGD) in 2016, granting more discretion to authorities for the placement of certain traffic signs.

Detail of the changes between strategies is given in [Appendix B](#). The key changes are as follows:

- The establishment of 5 core principles
- The clarification of the relationship between mean speed and 85th percentile speed

- A new section on design and potential engineering measures required to change driver behaviour
- The amalgamation of 20mph zones and limits into the collective term of 20mph areas
- A review and clarification of the role of the Speed Management Group
- The incorporation of a section on Speed Indicator Devices (SIDs)

The coronavirus pandemic of 2020 is recognised to have had an impact on travel patterns locally, nationally, and indeed globally – including an increase in walking and cycling and a reduction in vehicle use. The long-term impact is unclear at the time of writing, but the principles of this strategy support a shift in focus to these modes.

2.5 Format of the strategy

The strategy is divided into sections relating to aspects of the strategy.

In developing this strategy, a set number of key criteria have been established, many of which apply in specific circumstances. A summary of these is included in the appropriate section, along with a combined list in [Appendix J](#).

Other strategies or policy documents may be referenced in the document. Unless otherwise noted, these may be found on the [Hertfordshire.gov.uk](https://www.hertfordshire.gov.uk) website.

Additional technical information relevant to the section is included in appropriate appendices and referenced at appropriate points of the document.

Section 3: Policy Context

3.1 National Guidance

The SMS is underpinned by national guidance and regulations on speed limits, principally DfT Transport Circular 01/2013 *Setting Local Speed Limits*.

The responsibility for setting speed limits lies jointly between highway and enforcement authorities. For most roads in the county, Hertfordshire County Council are the highways authority. Notable exceptions are the motorway and trunk road network, managed by Highways England.

Hertfordshire Constabulary serve as the enforcement authority and are supported by the Hertfordshire Safety Camera Partnership.

3.2 Hertfordshire Corporate Plan

Hertfordshire County Council have a corporate vision that is used to guide the long-term objectives of the council and is summarised in this short, high level statement:

We want Hertfordshire to continue to be a county where people have the opportunity to live healthy, fulfilling lives in thriving, prosperous communities.

The corporate vision is supported by the corporate plan, which establishes the key priorities of the county council, including our ambition to provide residents with the opportunity to:

- Thrive,
- Prosper,
- Be healthy and safe, and
- Take part

The SMS is directly relevant to the ambition to be healthy and safe, though the safe management of the highway network will support all of these ambitions.

3.3 Hertfordshire Local Transport Plan and Accompanying Strategies

In May 2018 the new Local Transport Plan (LTP4) was adopted, setting out the transport vision for Hertfordshire through to 2031 with a framework for transport planning and investment and recognition of the transport issues and problems facing the county.

LTP4 identifies objectives, policies, and schemes that will assist with delivering a sustainable transport strategy in contrast to the previous car-centric local transport plans.

LTP4 is divided into themes, objectives, and principles which are then translated into policies and compliant schemes. It is recognised that the SMS can assist with delivering the following objectives:

- Objective 5 – Enhance the quality and vitality of town centres

- Objective 6 – Preserve the character and quality of the Hertfordshire environment
- Objective 7 – Reduce carbon emissions
- Objective 8 – Make journeys and their impacts safer and healthier

LTP4 contains 23 policy areas encompassing all areas of transport. The SMS directly contributes to or influences the following:

- Policy 1: Transport User Hierarchy
- Policy 5: Development Management
- Policy 7: Active Travel Walking
- Policy 8: Active Travel Cycling
- Policy 12: Network Management
- Policy 13: New Roads and Junctions
- Policy 15: Speed Management
- Policy 17: Road Safety

Policy 1, the transport user hierarchy, affirms that the county council will consider the needs of vulnerable road users such as pedestrians or cyclists ahead of other motor vehicle users in the design of any scheme and the development of any strategy. The reduction of speed limits to support active travel, as outlined in the SMS, is in direct support of this policy.

LTP4 contains a specific speed management policy – Policy 15 – which states:

The county council through its Speed Management Strategy, a joint working strategy with the Police, will seek to manage the network to achieve appropriate speeds in the interests of safety, other road users, and the environment.

The SMS sits alongside strategies and documents associated with other LTP4 policies, including but not limited to:

- Active Travel Strategy
- Roads in Hertfordshire – A Design Guide
- Road Safety Strategy
- Network Management Strategy

3.4 Place and Movement Approach

HCC has adopted a place and movement approach to road classification, recognising that the function and usage of roads across the county differ.

Building on an approach used by Transport for London, a matrix has been developed which classifies the highway network into 9 categories based on its relative place and movement function. Broadly speaking, roads that prioritise vehicle movement score highly for movement; roads that prioritise the movement or actions of people score highly for place.

Place and movement values are subject to change and may be used to identify areas where change is needed or desired. Aspirational place and movement values may support a change of environment, and consequently a change in speed, but will need to balance

The speed limit of a road can serve to encourage or discourage certain behaviours, and it is important that it matches the function of the road. As such, the place and movement category is a consideration when reviewing or amending speed limits, or when considering changes to street design or the local environment.

Further detail on the approach is given in [section 5.2](#).

Section 4: Core Principles

4.1 The Core Principles of Speed Management

The purpose of the SMS is to both deliver LTP4 policies and to provide a consistent approach to setting speed limits across the county.

The key principle of the SMS is to ensure that the speed for any road is in keeping with its environment.

In practice, this has led to the following five core principles:

- We will encourage speed limit changes that support active travel
- In some cases (where appropriate) we will lower speed limits
- In some cases (where appropriate) we will need to change the design of a road to change behaviour
- We won't put up speed limit signs alone and expect a significant behaviour change

In some cases (where we establish that speed limits are too low for the environment) we may need to raise speed limits

These principles will be applied to all roads in Hertfordshire where the county council serves as the highway authority.

These principles support the safe systems approach embedded in the road safety strategy both by accounting for driver awareness and strengthening road design.

Section 5: Principles of Setting Speed Limits

5.1 Introduction

Speed limits across the county should be consistent if they are to be understood and complied with by the majority of drivers. Badly set or inappropriate speed limits are often ignored and can impact compliance with the wider traffic network.

On an average journey it is likely that you will pass through numerous and frequent speed limit changes. If these speed limits are not closely aligned with the highway environment, they can cause tension, build frustration and increase the risk of inappropriate speed being used on a motorists ongoing journey.

This is a situation which needs to be rectified and may well involve the need to increase the speed limit in some locations to better suit the highway environment in an attempt to get better speed limit compliance further into a motorist's journey, such as through a town or village.

The enforcement authority, Hertfordshire Constabulary, provides speed enforcement alongside other duties involving community safety and issues of public concern. Departments including the Roads Policing Unit and Safety Camera Partnership have roles in the enforcement, education, and deterrence of speeding and other moving traffic violations.

Predominantly, enforcement is focused on the strategic road network. Whilst there is the potential to request enforcement activity via official channels – such as the priority setting forums, comprised of the local Safer Neighbourhood Team, or [ECHO](#), a platform for submitting views, opinion, and feedback to the police, and approval from the appropriate police inspector for the area – available resourcing is not infinite and should not be seen as the first or immediate response.

The overriding principle for applying speed limits is, as outlined in Circular 01/2013 *Setting Local Speed Limits*, that they should encourage self-compliance. To achieve this speed limits must:

- Be appropriate for the physical environment,
- Reflect the level of use by both motor vehicles and vulnerable road users
- Take account of the speed vehicles are currently travelling at,
- Account for any speed related collision history.
- Following this principle will allow the highways authority to encourage compliance by design.
- When setting speed limits, appropriate considerations include:
 - The level of use by vulnerable users such as pedestrians and cyclists
 - The surrounding environment, for example the presence of schools; shops; and places people want to visit, (ie the place and movement category)
 - The local road environment, including width, visibility, and parking

- The personal injury collision history
- The speeds vehicles are currently travelling at

Speed limits should be evidence-led, self-explanatory and appropriate for the environment. They should be seen as a maximum, not a target speed, and should reinforce the driver's assessment of an appropriate speed at which to progress

The appropriate management of speed limits can assist with managing congestion and increasing journey efficiency across the local and wider network. This complies with statutory duties placed on the traffic authority under the Traffic Management Act (2004).

The Hertfordshire speed limit framework serves to condense these guiding principles into a reference with appropriate examples of rural and urban environments operating at the desired speed limit. This framework is provided in Section 8 and is to be used as a starting point for identifying desired speed limits.

5.2 Place and Movement Category

The local environment and likely users of the road are important considerations when implementing changes, such as alterations to the speed limit. For example – residential area, schools, and shops are likely to have a higher number of pedestrians and cyclists, making lower speeds more suitable.

The county council has developed a process, known as place and movement, to categorise the network and take account for the various uses of roads. As a rule, roads with a high place value are those that people want to visit – roads with a high movement value are those that facilitate traffic

The place and movement value alone will not dictate the appropriate limit but can be used within the speed limit framework to identify where lower limits may be appropriate and whether changes to the environment need to be considered.

All roads in Hertfordshire have been assessed and scored based on a three by three matrix (Figure 1, below) which describes their appropriate place and movement values.

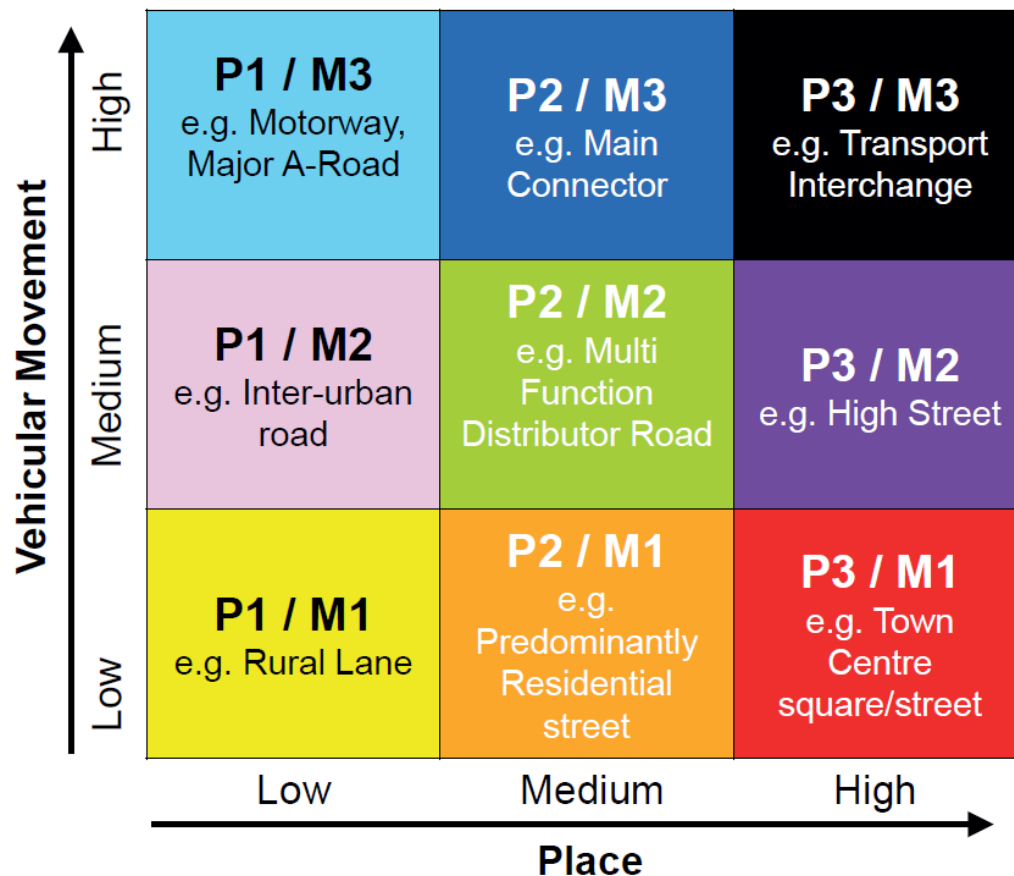


Figure 1 - Place and movement categories with example road types

Section 6 and 7 provide further detail in how the place and movement approach is applied to certain speed limits.

5.3 Existing Speeds

Circular 01/2013 *Setting Local Speed Limits* is the current national guidance and states that whilst traffic authorities should continue to routinely collect and assess both mean and 85th percentile speeds, mean averages should be used as the basis for determining local speed limits.

For clarity, the distinction between the mean and 85th percentile value is:

Mean speeds are the average speeds that vehicles travel at

85th percentile speeds are the speeds at or below which 85% of vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

A discrepancy between the mean and 85th percentile speeds will usually indicate that motorists have difficulty in deciding the appropriate speed for the road and would suggest that there is a disconnect between the speed limit and the environment. In such circumstances, it may be necessary to consider amending either the limit or the road design to ensure an appropriate match.

Table 1, below, shows the appropriate and expected speeds for different speed limits. In most cases, the mean speeds should match the posted or proposed speed limit.

85th percentile speeds are based on previous guidelines issued by the Association of Chief Police Officers (ACPO, now the National Police Chiefs Council, NPCC), and represent a 10% increase above the limit with a 2mph margin of error.

20mph speeds differ and are discussed in detail in Section 6.

Speed Limit	Mean Speed	85 th Percentile Speed	Standard Deviation
20	24	28	4
30	30	35	5
40	40	46	6
50	50	57	7
60	60	68	8

Table 1 - Speed limit ranges. All values in mph

On roads where surveys indicate that the measured speeds are beyond these thresholds, the appropriateness of the speed limit should be reviewed. This may indicate the need for additional speed management measures.

If the current measured speed is higher than the limit then the strategy allows for one of three outcomes:

- Keep the speed limit as it is,
- Introduce measures to reduce speeds to the limit

Review the rationale for the existing limit. In a small number of cases a higher speed limit may be more fitting for the environment and help encourage overall network compliance.

Appendix C includes further technical detail on the collection and application of speed data.

It may be necessary to collect speed data from multiple points in a road, route, or area depending on the extent of the scheme and differences in the local environment.

5.4 Temporary Speed Limits

If it should become necessary to place a temporary speed limit on a section of road, this must be agreed with the network management team for the area and follow the temporary order process identified on our website ahead of time as part of the routine permit or works application process.

These temporary restrictions should remain in place only when necessary and be reviewed as the local situation changes. Compliance with temporary speed limits can drop when there is no perceived reason for them, which may lead to limits being ignored when there is a more pressing need to protect life and equipment.

Any existing speed limit signage should not be visible in areas subjected to a temporary speed limit so as not to create driver confusion.

5.5 Universal Key Criteria

The first seven key criteria will apply to any amendments to existing, or introduction of new, speed limits in Hertfordshire and are listed in Table 2 below

Universal Key Criteria – Setting Speed

KC1	An assessment of the environment must be made to confirm that a speed limit is appropriate for the road. The Hertfordshire Speed Limit Framework will be used to meet this criterion
KC2	An assessment of the place and movement function of the road will be made to determine whether the appropriate speed limit will enable the correct place and movement activity to be undertaken. The HCC Webmap layer will be used for this assessment
KC3	For 30mph to 70mph limits, the mean speed should not exceed the proposed limit once implemented.
KC4	Mean and 85th percentile speeds will be collected before a limit is implemented or changed. Although mean speeds will be used as the basis for setting speed limits, if there is not a consistent relationship between the 85th percentile and mean speeds (see Appendix C), the appropriateness of the limit without additional measures will be considered.
KC5	When collecting existing speed data this should be recorded on the fastest section of road in free-flowing conditions.
KC6	When considering a revised speed limit, the promoting officer must follow the speed limits and zones implementation process and complete a Speed Limit Change Form (Appendix H) to ensure that all the relevant SMS criteria have been met.
KC7	The form is to be submitted to the Speed Management Group for approval prior to consultation and again following legal advertisement

Table 2 - Universal Key Criteria

Section 6: 20mph Areas

6.1 Introduction

The introduction of 20mph areas has been shown to encourage the uptake of active travel within an area¹, and as such serves to promote various LTP4 policies including Policy 1 (the transport user hierarchy).

All roads in 20mph areas must demonstrate speed compliance. In some cases, this may require the installation of traffic calming measures in order for a scheme to be agreed.

Mean speeds of 24mph or lower are considered to be compliant for the purpose of 20mph areas.

6.2 Terminology

Nationally there are two definitions for roads with 20 mph speeds, these are:

20mph limits (indicated by road signage only)

20mph zones (self-enforcing areas with engineering measures and some road signage)

It is recognised that the distinction between the two can create confusion, and they are often used interchangeably.

It is additionally recognised that a consistent approach to road signage is required to ensure the public understand and feel comfortable within posted limits.

To alleviate this, the county council will now use the collective term of **20mph areas** and introduce a minimum signing requirement.

Engineers will still be required to follow national legislation for zones and limits, however there will now be a requirement for additional speed signage on schemes which predominantly involve traffic calming. Further guidance is provided in Appendix E.

6.3 Application of the Place and Movement Approach

The place and movement approach can be used to identify those areas which may be appropriate for lower speeds due to higher pedestrian and cycle movements (due to local land use) and relatively low vehicle movement.

Roads and streets with a high place value are generally streets where vehicle movements are, or should be, low and where pedestrian or cycle movements are more desirable. Such areas would benefit most from 20mph areas.

As a starting point, 20mph areas are potentially appropriate on residential streets (place and movement P2/M1) and town centres (place and movement P3/M1). Some high streets (P3/M2) may also be suitable, depending on their character and location.

¹ (Atkins, Aecom, and Professor Mike Maher (UCL), 2018)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757302/20mph-technical-report.pdf

As noted previously place and movement is not the sole criteria for determining speed limits, and the specific environment will be considered in all cases.

Other roads with a higher movement value (i.e P2/M2) frequently connect areas with a high place value. Whilst some may be appropriate for 20mph areas, they are also likely to require additional supporting measures to ensure compliance.

Whilst the place and movement value can provide an indication of suitability for 20mph, other criteria will need to be taken into account as detailed in [section 6.7](#).

6.4 Identifying Appropriate 20mph Areas

Speed measurements must be undertaken in any area where a 20mph area is proposed in order to support the design of the scheme. As noted in 6.1.3, roads with speeds of 24mph or lower are considered complaint.

Where existing speeds are over 24mph, the implementation of a 20mph area will likely require traffic calming and/or technological measures to reduce and control speed to the appropriate levels and ensure self-compliance.

6.5 Schools

Advisory 20mph speed limits can be introduced outside schools should the environment be appropriate (P2/M1 or P3/M1) and mean speeds are measured as 30mph or less (during school pick up or drop off) prior to implementation. These advisory provisions are not legally enforceable but are a potential tool to encourage behaviour change.

Any advisory 20mph speed will operate during school start and finish times, if speeds are currently below 30mph.

These advisory limits do not preclude formal 20mph areas. Schools contribute to place value and are likely to benefit from 20mph areas should the environment be suitable or adaptable.

The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed, or where significant changes are made to existing school facilities.

6.6 New Developments

The physical design of new residential developments should encourage motorists to drive at 20mph or less with reinforcement by signage in predominantly residential areas and outside schools and other community facilities.

A revision to the 'Roads in Hertfordshire' technical guidance document will provide appropriate advice on the layout and design of roads to achieve this, incorporating best practice and requirements from national regulations, guidance, and specifications.

New roads designed for 20mph speeds will require a traffic regulation order to be progressed and funded by the promoter.

6.7 Key Criteria

The Key criteria which have been developed to guide the setting of 20mph areas in Hertfordshire are shown below:

20mph Area Key Criteria

KC8	HCC use a collective term of 20mph Areas to describe either a 20mph zone or a 20mph limit. 20mph Areas have different requirements to that found in national guidance and will always confirm to legislation. (A comparison table is contained within Appendix E)
KC9	When collecting speed data for 20mph areas, the following will apply: <ul style="list-style-type: none"> • The lead engineer will visit all roads in a proposed area • Mean speeds will be collected in all roads where there is a concern that vehicle speeds are high • Mean speeds will be collected in a random sample of other roads within the proposed area • The locations of the above will be agreed with the relevant police traffic management officer • With the correct judgement and experience this should avoid the need to count every road within a proposed 20mph Area.
KC10	An assessment of the environment must be made to confirm that a 20mph speed limit is appropriate for the road(s). The Hertfordshire speed limit framework will be used to meet this criterion
KC11	20mph areas without additional traffic calming measures will only be considered where the existing mean speeds are 24mph or below.
KC12	Speeds will be re-measured within one year on the roads that were surveyed before implementation, and must demonstrate that: 20mph areas have a maximum mean speed of 24mph once implemented, and 20mph areas are generally self-enforcing.
KC13	Where schemes have mean speeds higher than 24mph following installation then there are two options: Reintroduce the 30mph limit in whole or part, Introduce additional traffic calming measures
KC14	The 'Bus Infrastructure in Hertfordshire - Design Guide' says that if physical measures in a 20mph area are considered necessary on a bus route then the extent of these features (or length of area) should be kept to a minimum so as not to adversely affect the quality of the ride.
KC15	Advisory 20mph limits will be considered outside schools where existing mean speeds are 30mph or less during school start and finish times
KC16	Variable 20mph limits need to be self-enforcing and have a maximum mean speed of 24mph during their times of operation. A speed limit change form will still be required.
KC17	The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed, or significant changes are made to existing school facilities

KC18	Where new roads are designed for 20mph then a traffic regulation order is required to be progressed and funded by the promoter. This applies even if the road has been designed along principles within the 'Manual for Streets.'
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Table 3 - 20mph Area Key Criteria

6.8 20mph Area Signage

In 20mph areas it is particularly important that the public understand the limit. This necessitates the need for repeater signs or markings within the area to reinforce the limit. National guidance on 20mph speeds requires frequent signing (limits) or physical features with minimal signing (zones). The usage of 20mph areas in Hertfordshire allows more discretion with signing to ensure the public have a better understanding of what the speed limit is.

Where there is a 20mph area there would be repeater signs, roundels, or markings no less than every 200m unless local deviations are agreed with the Speed Management Group. Deviations are not permitted for 20mph zones.

In historic areas discretion will be exercised to help limit signage and any departures from policy would be overseen by the Speed Management Group

Further details of the signage requirements are given in Appendix D.

6.9 Existing 20mph Areas in Hertfordshire

It is recognised that there are variances in how 20mph speed limits and zones have been implemented historically across the county.

These schemes were correct at the time of installation, though do not necessarily comply with this revised strategy.

All schemes designed and delivered following the adoption of this document shall comply with the new strategy and older schemes do not set precedents nor allow for exemptions.

Section 7: Application of other speed limits

7.1 Overview

The default national position remains that:

30mph limits are applicable in areas with a system of street lighting, and **The national speed limit** (60mph for single carriageway and 70mph for dual carriageway roads) applies in all areas without.

The county council recognise that there is a wide spectrum of roads within these two categories and has established a speed limit framework (Section 8) to identify limits appropriate for certain roads.

In all cases, the speed limit for the road should match the environment and the usage of the road.

7.2 Rural Speed Limits

Significant areas in Hertfordshire are rural in nature and require different approaches to managing speed limits.

The Speed limit framework recognises the differences in environment, and accounts for both urban and rural settings when setting speed limits.

The principle remains that the speed limit is a maximum speed, not a target speed, and drivers should not feel that the limit of a road – regardless of circumstance – is the speed at which they should be progressing. In many cases the characteristics of the local road (eg road width and presence of bends) means that the majority of drivers will adjust their speed to the environment. Where there is a collision history or community concerns then lower speed limits may be considered.

Some rural areas may be suitable for a zonal 40mph speed limit when applying the criteria in Table 4:

Rural 40mph Speed Limits

KC19	<p>The County Council may consider 40mph zonal rural speed limits subject to criteria including:</p> <ul style="list-style-type: none">• The zone being self-enforcing. Mean speeds on all roads within the zone will be 40mph or less once implemented.• The zone will be within a defined geographical area, e.g. bounded by A & B roads or in an AONB.• The zone would have a predominantly local, access or recreational function and/or form part of a recommended network of routes for vulnerable road users.• A recognised or known collision problem
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Table 4 - Rural 40mph Speed Limits

Section 8: Speed Limit Framework

8.1 Overview

The Speed limit framework serves as a guide for the identification and selection of speed limits in both urban and rural settings by documenting the traits and features of a suitable environment.

The framework is designed to operate in tandem with place and movement.



The framework is split into possible speed limits, and is laid out as below:

Type of limit	
Urban	Rural
Picture example	Picture example
Road name	Road name
Key or expected features	Key or expected features
Guidance	Guidance

Speed Limit Threshold	
Before Implementation	Maximum mean speed
After Implementation	Maximum mean speed

The framework is based on guidance from the Department for Transport in Circular 1/2013 . *Setting Local Speed Limits*. Note that not all features will be present in all cases, nor is there an expectation for all to be present. They are intended indicative of environment only.

20mph Speed Areas

Urban	Rural
	
Prince Street, Watford	High Street, Ashwell
<p>Streets that are primarily residential, or where there is a high presence of pedestrians and cyclists.</p> <p>Areas around schools, shops, markets, playgrounds and similar areas where motor vehicle movement is not a primary concern – P2/M1 or P3/M1 place and movement categories (see section 6.3)</p> <p>May also be suitable for High Streets (P3/M2) depending on local character and traffic volume</p>	<p>Village streets that are primarily residential in nature</p> <p>Areas where there is a high volume of pedestrian or cycling movement – P2/M1 or P3/M1 place and movement categories (see section 6.3)</p> <p>Areas where roads are non-strategic and where motor vehicle movement is not the primary function.</p>
Circular 01/2013 – table1 & paragraph 90	Circular 01/2013 – paragraph 132



Speed Limit Threshold (Compulsory)

Before Implementation	24mph
After Implementation	24mph

Speed Limit Threshold (Advisory)

Before Implementation	30mph
After Implementation	<30mph



30mph Speed Limits

Urban	Rural
	
Howlands, Welwyn Garden City	Rabley Heath Road, Rabley Heath
<p>System of street lighting.</p> <p>The standard limit in built up areas with development on both sides of the road</p>	<p>Villages with 20 or more houses over a length of at least 600m, with a density of 3 houses per 100m (minimum).</p> <p>If there are fewer than 20 houses, exemptions can be made for key attractor buildings such as schools, shops, or places of worship.</p>
	<p>Circular 01/2013 – paragraphs 131, 133 & 134</p> <p>Traffic Advisory Leaflet 1/04</p>

Speed Limit Threshold

Before Implementation	30mph
After Implementation	30mph



40mph Speed Limits

Urban	Rural
	
Black Fan Road, Welwyn Garden City	B656 London Road, Langley
<p>Higher quality, wider suburban roads or those on the outskirts of urban areas.</p> <p>Little development</p> <p>Few vulnerable road users (pedestrians, cyclists, or equestrians)</p> <p>Parking and waiting restrictions present</p> <p>Buildings, if present, set back from the carriageway</p> <p>Where possible, caters for non-motorised users via segregation. May possess parallel, well provision footways or cycleways or a segregated facility in carriageway</p>	<p>Upper tier roads (typically A & B roads) with:</p> <p>A high number of bends, junctions, or accesses</p> <p>Substantial development</p> <p>A strong environmental or landscape reason</p> <p>A considerable number of vulnerable road users</p> <p>OR</p> <p>Lower tier roads with:</p> <p>Predominantly a local, access or recreational function, such as an AONB or adjacent to unenclosed common land</p> <p>A recommended route for vulnerable road users</p> <p>A recognised or known collision problem.</p>
	Circular 01/2013 – paragraph 128

Speed Limit Threshold

Before Implementation	40mph
After Implementation	40mph



50mph Speed Limits

Urban	Rural
	
Comet Way, Hatfield	A602 between the A10 and Anchor Lane
<p>Dual carriageway ring or radial routes</p> <p>Bypasses that have since become partially built up</p> <p>Should be little or no roadside development</p>	<p>Upper Tier roads with predominant traffic flow function. (Typically, A & B roads):</p> <p>Lower quality A & B roads which have a relatively high number of bends, junctions and or access.</p> <p>Areas where mean speeds are below 50mph and where the imposed limit would not impact traffic flow</p> <p>OR</p> <p>Lower Tier roads with important access and recreational facilities. (Typically, C & unclassified roads)</p> <p>C and unclassified roads with a mixed function and high numbers of bends, junctions or accesses.</p>
Circular 01/2013 – table 1	<p>Circular 01/2013 – table 2</p> <p>OR</p> <p>Circular 01/2013 - paragraph 128</p>

Speed Limit Threshold

Before Implementation	50
After Implementation	50



60mph Speed Limits

Urban	Rural
	
A1001 South Way, Hatfield	B1000, Welwyn
<p>Upper Tier roads with a traffic flow function. (Typically A & B roads):</p> <p>Strategic A & B roads with few bends, junctions or accesses.</p> <p>Edge of urban areas close to strategic routes.</p> <p>Little or no pedestrian use.</p>	<p>Upper Tier roads with predominantly traffic flow function. (Typically, A & B roads):</p> <p>High quality strategic A & B roads with few bends, junctions or accesses.</p> <p>OR</p> <p>Very high quality C and unclassified roads with a mixed function with few bends, junctions or accesses.</p>
	<p>Circular 01/2013 – Table 2</p> <p>OR</p> <p>Circular 01/2013 – Paragraph 128</p>

Speed Limit Threshold

Before Implementation	60
After Implementation	60

70mph Speed Limits

Urban	Rural
	
A10, Broxbourne	A414, St Albans
<p>Dual carriageways which form key inter-urban routes with few bends, junctions, or accesses</p> <p>Very low or no pedestrian presence</p> <p>Core strategic routes connecting population centres</p>	<p>Rural dual carriageway roads with segregated junctions and separate facilities for vulnerable road users.</p> <p>Areas that do not require intervention to control or mitigate speeds for safety reasons</p>
	Circular 01/2013 – Paragraph 121

Speed Limit Threshold

Before Implementation	70
After Implementation	70

Section 9: Supporting Measures

9.1 Overview

Speed limits in Hertfordshire should encourage self-compliance. That is to say, the speed limit should match the environment of the road section wherever possible.

To influence this, the highway and traffic authority have access to a number of measures including:

- Physical engineering measures, for example vertical and horizontal traffic calming
- Speed Indicator Devices (SIDs)
- Technology such as safety cameras, average speed cameras, and variable message signs
- Education, training, and publicity

The following sections provide an overview of these measures, with further information available in the appendices of this document.

Section 10: Design Influences and Engineering Measures

10.1 Introduction

Hertfordshire County Council use design to dictate speed where possible. This has been found to be the most effective means to significantly change driver behaviour. The advice given to drivers through rule 146 of the Highway Code is to:

Adapt your driving to the appropriate type and condition of the road you are on.

Road users should be prepared, anticipate and be able to stop within the distance they can see to be clear. It is important that drivers understand the speed they are expected to travel at through the layout and context of a road.

A report² from the Transport Research Laboratory found that static signs alone had a small impact on measured speeds, with around a 2mph reduction on average. Subsequent research³ has confirmed these finding and shown that speed limit signs alone are insufficient to significantly alter drive behaviour.

Where measured speeds are above the thresholds for the desired limit (as set out in Table 1), additional measures will be required to ensure compliance and adherence by drivers

10.2 Implementing Engineering Measures

The engineer must first confirm that the speed limit is suitable and appropriate for the environment prior to considering engineering measures. This may include a review of the extent of the limit to better match surroundings – for example, moving the start of a limit to a village boundary to reflect a visual change in environment. If, after consideration, there remains the need to implement measures those listed below have been identified as having the potential to influence vehicle speeds to varying degrees. Note the list is not exhaustive, suitability of measures at individual locations will need to be considered and it is outside the scope of this strategy to provide technical design guidance. This may be found within Roads in Hertfordshire, or through Local Traffic Notes including LTN 1/07 (Traffic Calming)

Existing Roads

Roundels and road markings
Vertical Measures (eg. Humps)
Horizontal Measures (eg chicanes)
Road or point closures
Road width (including formalised parking)
Enforcement/Technological Measures

² (Transport Research Laboratory, 1998)
<https://trl.co.uk/uploads/trl/documents/TRL363.pdf>

³ (Atkins, Aecom, and Professor Mike Maher (UCL), 2018)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757302/20mph-technical-report.pdf

New Roads

Road width (including formalised parking)

Enforcement/Technological Measures

Curvature

New junctions

Roundabouts

Traffic signals

10.3 Key Criteria for Engineering Measures

The county council have established a number of criteria to guide the appropriate implementation of engineering measures. These measures and the accompanying criteria are included as Appendix K

For reference, the below measures are included within the appendix:

- Speed limit buffer zones
- Speed limit countdown markers
- Home zones
- Quiet lanes
- Gateway and entry features
- Chicanes
- Pinch points
- Roundels and road markings
- Central islands and refuges
- Round top and flat top humps
- Cushions
- Sinusoidal humps
- Rumble strips and rumblewave
- Mini roundabouts

Section 11: Speed Indicator Devices (SIDs)

11.1 Introduction

Speed Indicator Devices (SIDs) are a tool to remind drivers of the speed limit and can be useful when there is a disparity between the posted limit and observed speeds. They are informational repeater signs only, and do not provide any enforcement function.

SIDs consist of a screen, radar detector, and solar panel/battery unit mounted on a pole within either a retention socket or foundation. When movement is detected in the field of view, the device triggers and returns a value (speed in mph) that is then displayed on the screen to oncoming vehicles, along with either a 'happy' or 'angry' face depending on the rate of travel in relation to the speed limit. More excessive speeds trigger a 'Too Fast' message.

The county council provide new Speed Indicator Devices (SIDs) through several routes:

- Non-core budgets, such as the Locality Budget which comprises the Highways Locality Budget (HLB) and the more general locality budget held by the county councillor for the area
- Third parties such as parish councils
- The OPCC Road Safety Fund

Very rarely, core budgets may be used to replace older installations with modern SIDs or as part of wider programmes.

Retention sockets allow the SIDs to be relocated to other locations or to be swivelled in their current location to face a different direction of travel. Relocating or swivelling SIDs regularly has been demonstrated to have greater influence on traffic speeds, as SIDs become less effective if retained in the same location for longer than six months.

SIDs should not be confused with Vehicle Activated Signs (VAS). VAS are distinguishable as they do not display a vehicle's travelling speed but instead typically an image of the posted speed limit or a hazard ahead e.g. bend in the road. This distinction is further clarified in Department for Transport Circular 01/17

The majority of SIDs have been and continue to be installed using HLB, as such the Highways locality team administer all requests and review all sites. Before any consideration is given, a funding source must be identified.

11.2 Speed Criteria

SIDs and sockets installed with via HLB, the OPCC Road Safety Fund, or HCC's core budgets must be in locations which meet at least one of the speed criteria given in Table 5

SIDs and sockets fully funded by third parties (not the OPCC Road Safety Fund) or the general locality budget are not required to satisfy the speed criteria.

Speed criteria must be checked using speed survey data collected by either HCC or the police over a full seven-day period. Existing data (no older than five years) may be used if no significant change to the environment has occurred since the data was collected.

Posted speed limit	Minimum average speed	Minimum 85 th percentile speed
20	20.1	24
30	30.1	35
40	40.1	46

Table 5 - SID speed criteria. All speeds in MPH, 85th percentile speeds based on OPCC guidelines

Roads with a posted speed limit above 40mph are not recommended for SIDs and would instead require further study. This may produce a package of measures including a SID

11.3 Location Requirements

All SIDs require certain circumstances to operate correctly and effectively and must fulfil the criteria given in Table 6.

Item	Requirement
Data Collection Safety	There is sufficient access to the site to allow the safe collection of data.
Daylight	The proposed location will receive a high level of daylight and is free of existing or seasonal vegetation. The solar panel should be facing as close to due south as possible.
Footway Clearance	At least 1.5m footway sideways clearance (if present) is available for pedestrians.
Forward Visibility	There is forward visibility of at least 50m (20-30mph limit) or 75m (40mph limit).
Highway Land	The proposed location is on highway land, supported by a recent boundary plan.
Multiple Detection Vectors	The SID will not activate for roads running adjacent or parallel to the site.
Operational Distance	The SID has no large obstructions (gates/fences, buildings, railings) within 100m.
Property Boundary	If necessary to install outside of a property, the SID should be sited on a boundary line so as to not interfere with an existing or potential access.
Set Back	The proposed location for the pole is set back at least 1.0m from kerb edge, or 0.5m from the edge of the sign (greater distances are required for higher speed roads and/or if the SID is positioned on a bend/junction radius).
Single Carriageway	The SID serves a single carriageway road.
Underground Obstructions	The site is clear of any utility or manhole covers or trenches that may suggest interfering with placement (check of underground utilities will also be undertaken).
Structures	The proposed location is at least 5m from a bridge, culvert, or other structure.
Vertical Clearance	There is at least 2.4m vertical clearance (this should be standard at point of install) – if the sign overhangs a cycle

Item	Requirement
	track or shared use space, this should have a minimum of 2.5m vertical clearance.
Visibility splay of other signs	The sign is clear of the visibility splay of other highway signs.
Vegetation	Double check vegetation and likely vegetation growth if the site is inspected during autumn/winter. Vegetation will be the likely reason that a SID is impeded, whether to the forward visibility to the sign or to the solar panel.
Within speed limit	The SID will not activate outside of the speed limit it is intended to indicate.

Table 6 - SID installation guidelines

11.4 SID Effectiveness

Research undertaken by the Transport Research Laboratory⁴ found that SIDs are most effective when moved regularly

The same research found that, in ideal conditions, SIDs would provide a reduction to mean speeds of around 2mph

11.5 SID Relocations and Swivels

Placing SIDs in retention sockets allows for them to be easily moved and/or rotated as necessary.

SID signs can be rotated to face alternative directions of traffic, allowing a carefully placed installation to serve a considerable length of road. In some locations, additional sockets may be required to ensure appropriate visibility

Given the benefits of moving SIDs to keep them effective, applicants are strongly advised to consider providing additional sockets and the funds to routinely move the SIDs.

11.6 Data Collection and Use

SIDs store up to 200,000 unique events in their internal memory – this includes information as to the date, time, and speed of traffic recorded. This data can be downloaded by the county council only and subsequently cleared from the device via a mobile application.

SIDs collect data as part of routine operation but this is not the primary function of the device. As such, they are not calibrated to serve as traffic counters and there remain concerns over the accuracy and validity of data accessed from SIDs. This, along with the accompanying costs, prevents the county council from establishing a programme of routine data collection. Applicants may request data for which a fee will be charged

⁴ (Transport Research Laboratory, 2008) <https://trl.co.uk/uploads/trl/documents/PPR314.pdf>

11.7 Commuted Sum

The price to install a new SID includes a commuted sum to provide for maintenance and replacement for a set period (currently five years) from the first installation. A second commuted sum may be paid at the start of the sixth year, which will insure the device for a further five years.

Where a commuted sum is not paid any SID that is damaged or irreparable will be removed and not replaced. The same applies for SIDs that go beyond the period covered by the commuted sum.

11.8 Third-party Funding

The success of SIDs within local communities often leads to a demand that cannot be met solely by using the councillors' HLB. Third-party funding for SIDs has increased as a result, and sources now include the OPCC, town and parish councils, and recognised Resident Associations. SIDs cannot be funded by private individuals.

The county councillor general Locality Budget is also considered as third-party funding for this purpose.

Irrespective of the funding source, the SID becomes an HCC asset once installed – a third-party is not able to move or access the SID without ordering or requesting such services through HCC.

11.9 Key Criteria for Installation

The four key criteria that apply to SIDs are listed below:

Speed Indicator Devices

KC43	SIDs funded using the Highways Locality Budget (HLB), the Police and Crime Commissioner's Road Safety Fund (PCC), or HCC core budgets must meet at least one of the criteria in Table 5
KC44	SIDs funded by other sources (not HLB, OPCC or HCC core budgets) are not subject to the speed criteria set out in Table 5
KC45	SIDs are not recommended for speed limits above 40mph
KC46	In all cases SIDs are required to satisfy the location requirements in Table 6

Table 7 - SIDs key criteria

Section 12: Safety and Speed Cameras

12.1 Introduction

Camera technology deployed in the county includes Safety Cameras (core sites) as well as other non-core sites which address more general speeding concerns. The use of such technology can be a cost effective and robust means of managing speeds in appropriate environments

The primary purpose for installing safety cameras on the highway is to reduce the frequency and severity of people being injured due to collisions on the road network through enforcing traffic speeds and reducing red-light running.

Other camera types on the network may be installed due to community concerns.

The use of cameras should always be proportionate, targeted, consistent and transparent in line with current NPCC guidance.

Before any camera technology can be used on a public highway it must hold Home Office Type Approval for it to be legally enforceable.

The following camera technology is currently used in Hertfordshire:

- Rearward facing static cameras.
- Forward facing static cameras.
- Simultaneous bi-direction cameras.
- Red light static cameras.
- Mobile vans equipped with enforcement technology.
- Average safety cameras used by Highways England for road works enforcement.
- Average speed cameras commissioned by the OPCC.
- This section outlines the criteria to be applied to different camera sites.

12.2 Core Sites

Stringent criteria are used (Appendix F) for the selection of core site safety cameras, based on collected data from police Stats 19 forms collated over the previous three-year period. An emphasis is placed on the number of people killed or seriously injured.

The county council, as highway authority, does not have the legal jurisdiction to enforce moving traffic violations relating to speed and red-light enforcement. Therefore, the core site safety camera network is operated and funded by the Hertfordshire Safety Camera Partnership which comprises Hertfordshire County Council, Hertfordshire Constabulary, and HM Courts and Tribunals Service.

The collision criteria vary for static, mobile and red-light cameras. An assessment of speed data is also required. Other cost-effective measures must be considered as part of the selection process before safety cameras are chosen as a potential option.

This should avoid the situation experienced elsewhere in the country where large numbers of cameras have been deployed in a variety of disparate locations putting additional maintenance liabilities on local councils and additional pressure on police back office staff to operate them.

Evidence from independent evaluations of the National Safety Camera Programme has consistently shown that the use of cameras has been effective when deployment was based upon locations where a specific level of killed or seriously injured (KSI) collisions and excessive speed above NPCC thresholds had occurred.

Collision reduction figures in Table 8 compare a three-year period before installation with the most recent three year after installation for safety cameras in Hertfordshire. This information shows the continued effect that the safety cameras have in reducing collisions and traffic speeds.

	Static	Mobile	Red light
Collision reduction KSI	48%	39%	47%
Collision reduction all severity	78%	71%	80%
Speed reduction	7.1mph	2.3mph	N/A

Table 8 - Safety camera collision reduction

All new sites require the agreement of the Speed Management Group.

Details of current Safety Camera locations can be found at:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/safety-camera-locations-speed-cameras/safety-camera-locations-speed-cameras.aspx?searchInput=&page=1&resultsPerPage=10&view=list>

12.3 Community Concern Sites

Community concern sites do not have to meet the core safety camera site criteria but must have documented and widely supported concerns from both the community and partner agencies. These sites will be associated with genuine levels of traffic violation which may give rise to a fear of harm, or which may reduce the take up of active travel.

These sites typically suffer from anti-social and intimidating non-compliance with the speed limit, but which may or may not be associated with a number of collisions and injuries.

Any assessment will be evidence led to determine the scale of the problem and to consider whether camera intervention is justified, fair, and proportionate and other alternatives are not suitable. Funding is usually only available from external sources.

One specific source of funding for community concern sites is the OPCC's Road Safety fund. If a camera is deemed to be the most appropriate solution to address an identified issue these locations would be owned and operated by the OPCC who provide a commuted sum to the county council for ongoing maintenance. The county council would be responsible for making the site safe in the event of a camera becoming damaged.

The criteria for concern sites are awaiting agreement, but includes sites where:

- A genuine speeding issue has been identified which is in excess of NPCC enforcement thresholds.
- There is wide and documented support from the relevant parish/town council and community.
- There is agreement from the police as enforcement authority.
- There is agreement from the elected county councillor on behalf of the Highway Authority.
- Funding has been identified.
- The site conditions are suitable for the type of enforcement equipment proposed.
- That safety camera enforcement is the right solution.

12.4 Other Site Criteria

Other non-core sites for potential camera deployment include:

Traffic Management Sites - these are sites where analysis identifies that traffic will need to be managed as a result of an increased risk of harm to road users whilst a highway is being altered. Examples include the Highways Agency Digital Enforcement Camera System (HADECS) installed and used by Highways England on smart motorways

Event-based Sites - these are sites that have been identified as having a value in camera enforcement as a deterrent to offending or anti-social behaviour, either due to being locations of significant offending rates or where offenders are known to gather. An example is the system on the A10 proposed by the police and funded by the PCC to deter illegal street racing.

12.5 Future Camera Technology use in Hertfordshire

Technology is ever changing, and we are aware that a number of safety camera devices based on camera systems linked to Automatic Number Plate Recognition systems are in 'Type Approval' stage with the Home Office. All make use of digital and radar sensor technologies. The county council will continue to monitor the technological developments and identify potential opportunities for piloting or trialling new types of system

Hertfordshire was an early adopter of digital camera technology with very few locations requiring upgrades.

It is also noted that in vehicle technology such as intelligent speed assistance systems are now supporting the camera partnership's wider objectives, enabling motorists to achieve greater self-compliance with posted speed limits

Average speed technology will be considered through our route criteria contained within Appendix F, where deemed appropriate, and if funding is available. This technology works best on roads with large distances between junctions, which enables monitoring over a reasonable distance. In urban areas more, junctions require more camera locations to cover a zone and these systems do not allow for instances where, for example, a pelican crossing will stop traffic. This reduces their effectiveness as the approach and exit speeds can be high but, due to the delays during the journey, the average speed technology would not recognise an offence having been committed.

12.6 Key Criteria for Installation of Cameras

The applicable criterion for safety cameras is given in Table 9

Safety Cameras

KC47	The County Council will use the 'Criteria for Safety Camera Site Selection and Implementation' matrix in Appendix F to assess the suitability and implementation of locations for safety cameras
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Table 9 - Key criteria for safety cameras

Section 13: Education, Training and Publicity

13.1 Overview

As part of the Hertfordshire Road safety partnership, the county council delivers a range of educational programmes for all road users, including pedestrians, cyclists, and motorists. These programmes make reference to the dangers of speed to the individual and/or other road users.

Training activities which have a clear emphasis on speeding issues are set out in this section.

13.2 Learn2Live

Younger people continue to be disproportionately represented in Hertfordshire's KSI statistics, with cited reasons including:

- Lack of experience and poor hazard perception
- An often too casual and over-confident attitude to speed
- Low risk awareness and peer pressure

In response, the Hertfordshire Road Safety Partnership runs the Learn 2 Live young road user event for approximately 7,500 students every year. It is acclaimed by attendees and has been verified as positively changing the attitudes of young drivers and pre-drivers

13.3 National Driver Offender Retraining Scheme (NDORS) Courses

The county council deliver the full range of NDORS courses on behalf of Hertfordshire Constabulary. These courses provide eligible offending drivers with a short course of retraining as an alternative to punishment for low-level speeding and other driving offences

The National Speed Awareness Course (NSAC) has the primary purpose of encouraging and facilitating compliance with speed limits by challenging attitudes towards speeding/ The course offers insight, awareness, and understanding of speed choices and equips participants with the knowledge necessary to change their behaviour.

Nationally, evaluations in 2018 found that participation in the NSAC has a larger effect on reducing speed reoffending than penalty points and fines associated with the Fixed Penalty Notice which would otherwise be issued.

Further web-based information on safer driving, education, and courses may be found here:

<https://www.hertfordshire.gov.uk/services/Highways-roads-and-pavements/Speed-awareness-and-driver-training/Speed-awareness-and-driver-training.aspx>

13.4 Publicity Campaigns

The Members of Hertfordshire's Road Safety Partnership deliver a range of publicity campaigns aimed at raising the awareness of unsafe behaviours (often referred to as the 'Fatal 5') including inappropriate and excess speed. These are coordinated to support the NPCC's road safety calendar. These campaigns are data and intelligence led and based on the at-risk groups and issues identified in the Road Safety Strategy.

13.5 Key Criteria

The education key criterion is detailed below:

Education, Training & Publicity

KC48	The County Council will continue to run and develop education, training and publicity programmes to reduce speed related collisions.
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Table 10 - Key criteria for education, training & publicity

Section 14: The Role of the Speed Management Group

14.1 Overview

A formal process is in place to consider speed limit changes and ensure a consistent approach is followed countywide. This is encouraged by the usage of specific key criteria found within the SMS and outlined in Appendix J.

Changes to speed limits may be proposed in isolation, as part of a wider scheme involving more substantial highway alteration, or as a result of or to facilitate development sites. It is important, given the wide variety of possible sources, for there to be a point of consistency during the process

The speed limit change process, including the role of the group, is outlined in section 16

14.2 Purpose of the Group

The Speed Management Group (SMG) is a policy led officer group which meets quarterly.

The group do not propose or authorise speed limit changes and have no budget allocation or resourcing. Officers attend the group as a function of their regular duties.

Primarily, the SMG ensure that the strategy and framework within have been applied correctly and consistently whenever handling a request for a speed limit alteration. This finding would then be presented as a recommendation to the lead officer for a scheme.

The SMG will make a recommendation as to whether the request for speed limit alteration should be granted based on its compliance with the framework. Any recommendations will be then taken to the HCC Director of Environment and other Senior Hertfordshire County Council officers for agreement and then to the Executive Member for Highways and Environment for political signoff.

Any proposed changes to speed limits will be subject to public consultation as part of the Traffic Regulation Order process. The consultation materials will include a record of the technical recommendation from the Speed Management Group.

The SMG will additionally review speed compliance schemes that have been delivered and ensure that relevant findings are taken forward should it be necessary.

14.3 Membership of the Group

As the remit of the group is to provide technical review against the framework, and with countywide responsibility, the membership of the SMG is sourced primarily from the highway authority.

As the SMS serves as a joint strategy, and the enforcement authority is consulted on all speed limit changes, Hertfordshire Constabulary do maintain a presence as part of the group.

Current membership of the group is provided in Table 11 below.

Hertfordshire County Council	Highways Safety Team
Hertfordshire County Council	Highway Design Team
Hertfordshire County Council	Highways Strategy Team
Hertfordshire County Council	Development Management Team
Hertfordshire County Council	Network Management
Hertfordshire County Council	Road Safety Team
Hertfordshire Constabulary	Road Policing Unit (Operations)
Hertfordshire Constabulary	Road Policing Unit (Strategy)

Table 11 - SMG membership, October 2020

Other departments or organisations may join the group should a need be identified. Membership of the group will be reviewed frequently to ensure appropriate officers, departments, and organisations are present

Section 15: Potential Funding

15.1 Introduction

This section serves to outline potential funding sources for speed management work countywide.

Speed reduction measures can be costly, and funding will likely be subjected to internal or external bidding processes before being secured. It should not be assumed that there is funding available to implement traffic calming features to facilitate speed limit changes.

Primarily, schemes will be delivered by the highway authority using a variety of possible funding streams detailed below.

Some schemes may be funded or delivered by development sites under legal agreements (usually, section 106 and 278 (both Highways Act, 1980) respectively).

15.2 Local Transport Plan Funding

Local Transport Plan capital funding is used to deliver the county council Integrated Transport Programme (ITP). ITP schemes are a core part of the County's Highways Service, delivering a mixture of transport and highway improvement measures across the County. ITP schemes support the delivery of the council's LTP4 nine transport objectives

The types of changes delivered by the programme include:

- Introducing traffic calming measures,
- The introduction of 20mph areas,
- New pedestrian crossings,
- New cycling infrastructure, or
- Urban realm improvements.

An annual ranking process is undertaken to prioritise safety related schemes for the ITP programme.

15.3 External Funding

External funding may be made available by various groups, including but not limited to:

- District, borough, town, or parish councils;
- Central government funding;
- The OPCC Road Safety Fund
- Grants

Where possible, the county council will work with other local authorities with a local interest to jointly fund or deliver speed management schemes that meet the objectives of both parties.

Grants and external funding may place conditions on what projects can or cannot be delivered or provide timescales for delivery. The county council will review conditions to ensure schemes are appropriate for the funding sources available.

More details about the OPCC Road Safety Fund can be found in 14.6

15.4 Highways and Locality Budgets

Either the Highways Locality Budget (HLB) or more general Locality budget can be used towards speed management schemes, so long as the key criteria outlined in the SMS are followed and the implementation remains consistent.

Historically, these budgets have been used to fund SIDs or studies into measures that would be required.

15.5 Developer Funding

Funding for introducing speed control measures may be made available via development sites. These will usually be focused on the local area and be aligned to ensure the development does not adversely impact local transport.

Section 278 agreements would allow for third party works – if permitted by the highway authority – to introduce a permanent change to the network, which may include a change of speed limit and measures to ensure compliance with this change.

Some districts have begun to introduce the Community Infrastructure Levy (CIL), a charge local authority may levy on new developments within their area. CIL funding can provide a route to deliver the infrastructure required to support a development.

Section 106 funding would be sourced from a development and provide a set amount of funds to be spent in line with an accompanying agreement.

This fund may be suitable for speed management schemes, providing:

- It is appropriate to the wording of the agreement, and
- The Environment and Infrastructure Department Highways and Transport S106 Guidelines have been followed.

Section 16: Process for Changing Speed Limits

16.1 Introduction

The county council have devised a 4-stage process for considering a request for a speed limit change, outlined in Figure 2, as follows:

- Stage 1—Assessment of whether it is a priority
- Stage 2—Check against SMS criteria
- Stage 3—Check against funding availability
- Stage 4—Public consultation (for TRO purposes)

In order to begin this process, the officer promoting a change of speed limit will need to complete a Change of Speed Limit form (Appendix H) which will validate relevant criteria from the SMS.

If, following this, the proposal is taken forward for promotion the form will also require manager approval and submission to the Speed Management Group (SMG) for review.

The SMG will then assess the proposal against the speed limit framework and make a recommendation as to whether the change should be adopted.

Any recommendations will be then taken to the HCC Director of Environment and other Senior Hertfordshire County Council officers through the Strategic Transport Issues Board (STIB) for agreement and then to the Executive Member for Highways and Environment for political signoff.

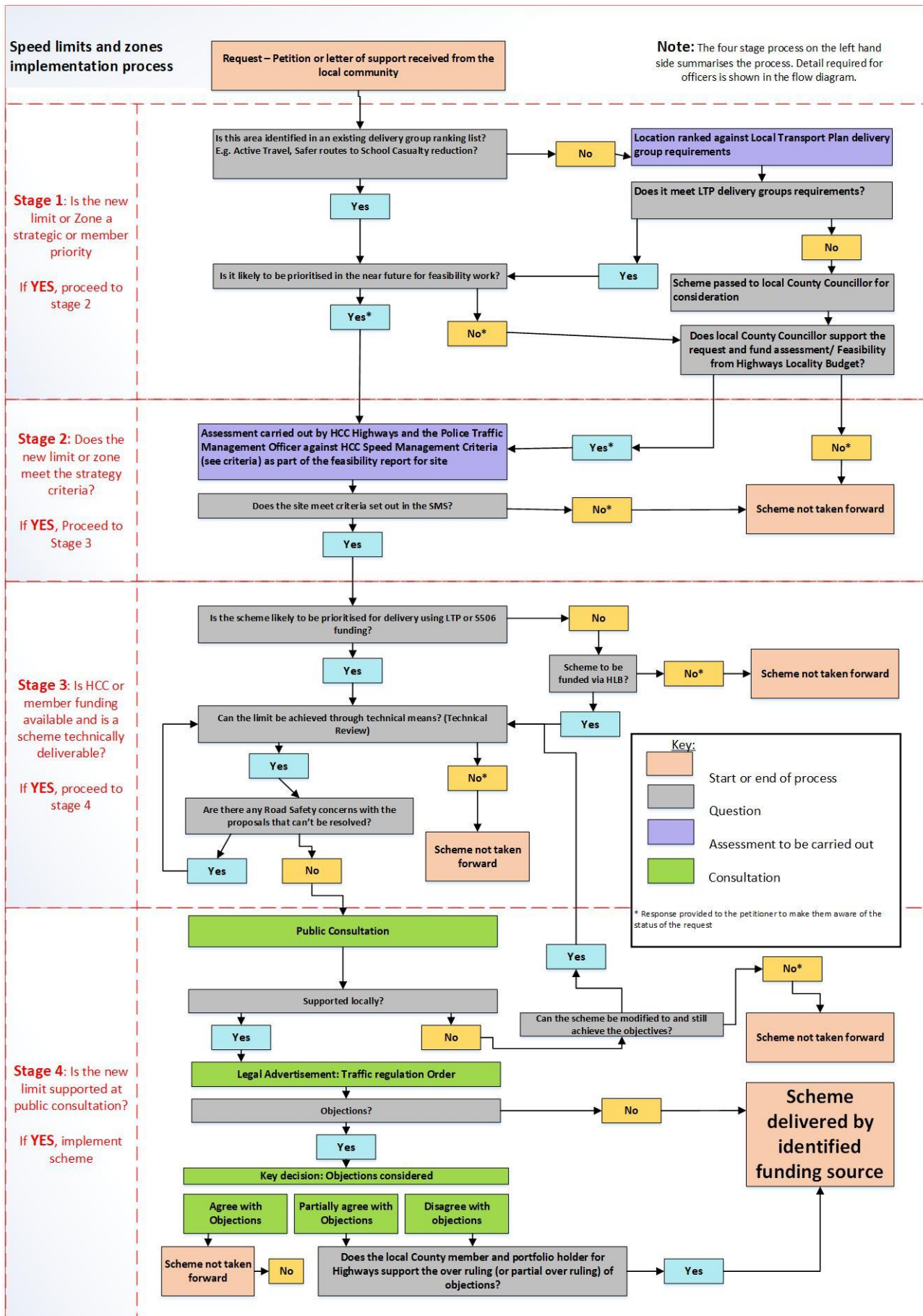


Figure 2 - Change of speed limit process

16.2 Police Support

Enforcement of speed limits may only be undertaken by the enforcement authority, and as such comment and support from the police should be obtained as soon as practical.

Engagement with the police may be undertaken via the SMG, which will allow for a collective review with county council officers to ensure the identified or desired speed is appropriate

16.3 Traffic Regulation Orders

Speed limits are set via Traffic Regulation Orders (TROs); without a TRO, the road would default to the national speed limit or 30mph – if possessing a system of street lighting. A TRO is required to change an existing limit to 30mph.

TROs must follow a consultation and advertisement process, being reviewed by members of the public and key stakeholders. This process will allow for local representation to any proposed changes.

Given the consultation requirement, it is recommended that wherever possible local support be identified prior to beginning the TRO process.

Section 17: Speed Enforcement

17.1 Introduction

The highway authority, enforcement authority, and by extension Safety Camera Partnership all have functions and roles related to speed enforcement

The Chief Constable is responsible for the direction of the enforcement authority and all officers and staff within the constabulary. The enforcement authority is responsible for speed enforcement

The county council serves as both the highway and traffic authority and is responsible for the management of speed, and setting of speed limits, on all public roads not under the control of Highways England

The Hertfordshire Safety Camera Partnership installs, operates, and maintains most safety cameras – the exceptions being operated by Highways England or the OPCC. The partnership seeks to reduce road collisions and casualties through the prevention, detection, and enforcement of speed and red-light offences.

17.2 The Role of the Police

The enforcement authority will use the 'Hertfordshire Constabulary Speed Enforcement Guide' (see flowchart in Appendix G) focusing Roads Policing Unit officers at speed related collision history sites and Safer Neighbourhood Team (SNT) officers at speed complaint sites.

By conducting speed enforcement and education activity at locations identified as having a speed related collision history the police intend to try to reduce the number of collisions and casualties occurring on our roads as well as contributing to achieving road safety targets.

The police have a high demand for officer time countywide, and adherence to the process above will ensure that priorities are balanced accordingly.

Each time a road traffic personal injury collision is reported to the police, comprehensive details about the circumstances involved are recorded on a STATS 19 form. This data is shared with the Highway Authority who use it to identify locations where engineering or educational activity may be used to address a particular problem.

For speed enforcement purposes the police use this data to identify the locations that most frequently experience speed related collisions so they can be considered for enforcement.

17.3 Local Priorities

The means by which the enforcement authority collects and collates local priorities differs across the various branches and stations across the county. Local priorities may include issues related to or surrounding speeding, include anti-social behaviour or excessive noise.

Hertfordshire Constabulary run the platform ECHO, which allows the public the ability to communicate points of concern or suggestions to the enforcement authority for review. This is not a suitable route to report crimes.

Safer Neighbourhood Teams (SNTs) continue to provide a focus on local policing and can provide advice on current and future priorities. Details on the appropriate Safer Neighbourhood Team may be found here: <https://www.police.uk/pu/your-area/hertfordshire-constabulary/>

Raising issues as a local priority may lead to speed enforcement or further monitoring should resource and environment allow. This is additionally outlined in [Appendix G](#)

17.4 The Role of the Police and Crime Commissioner

The Police Reform and Social Responsibility Act replaced Police Authorities with elected Police and Crime Commissioners on 22 November 2012. This created the Office of the Police and Crime Commissioner (OPCC)

The Police and Crime Plan for Hertfordshire 'Everybody's Business: Community Safety and Criminal Justice Plan 2019 –2024' recognises that speeding takes a high toll in relation to those killed or seriously injured on the roads and seeks to address concerns raised by residents through the use of his Road Safety Fund.

As well as working closely with the chief constable, the Commissioner works with the full range of other public services (for example local government, the courts, and the fire service) that can help prevent crime.

The OPCC operate two campaigns that specifically target speed management and road safety, and are listed below:

17.5 Community DriveSafe Campaign

The DriveSafe campaign allows residents to petition the Commissioner with concerns of speeding vehicles in their communities. At least ten people living or working in the area must support the campaign, and at least three of those must be willing to run the scheme and use roadside speed monitoring tools.

There are currently 28 active DriveSafe groups operating across the county helping to educate motorists about the dangers of excessive speed.

Volunteers are trained by their local police officers in operating safely near highways and in how to use the speed management equipment. They will also be equipped with high-visibility jackets and warning triangles. This works in two ways - for the safety of the volunteer and to highlight to motorists and the wider community that DriveSafe activity is going on.

The speed monitoring device indicates the speed of passing vehicles, showing a 'smiley face' to those travelling within the speed limit and a 'sad face' if they are over the limit. The volunteers will record the car registration numbers of vehicles travelling in excess of the speed limit and warning letters will be sent to the registered keeper of the vehicle. The volunteers can also record anti-social or dangerous driving, such as occupants not wearing seat belts or drivers using their mobile phones.

For further information about the Community DriveSafe scheme please visit the following web page: <https://www.hertscommissioner.org/community-drivesafe-scheme-hertfordshire>.

17.6 OPCC Road Safety Fund

The Police and Crime Commissioner's Road Safety Fund is an additional source of funding available to any organisation that can contribute to improving road safety across the county. This funding stream is supported by the Hertfordshire Road Safety Partnership and may be used to fund 'community concern' speed management schemes and measures with a focus on education (such as the SIDs) and enforcement (e.g. camera technology) rather than engineering measures which are seen as a highways function.

Section 18: Appendices

18.1 Appendix A – Glossary of terms and acronyms

Definitions

20mph Area: A collective term used exclusively in the SMS to discuss matters that affect 20mph Limits or 20mph zones.

20mph Limit: A road or series of roads where mean speed is 24mph or less.

20mph Zone: A series of roads which may include traffic calming measures where mean speeds are 24mph or less.

85th Percentile Speed: The speeds at or below which 85% of all vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

Advisory 20mph Limit: A part time 20mph speed limit which does not have a legal order (Traffic Regulation Order). It is therefore not enforceable. To be used outside schools only.

Advertisement (Legal): The process where a Speed Limit order is legally advertised. At this point the scheme can only be reduced or withdrawn.

Consultation: The legal process where opinion is sought and used to influence the scheme outcome. A scheme can be changed at this point.

ECHO: The Police comment / suggestion forum - a means for the public to provide feedback on the police service and the community

Free Flowing Traffic: See Appendix D

Features: Repeater signs and repeater roundels and traffic calming measures.

Hazardous Site: A site that meets one of a number of injury collision criteria as set out in the Road Safety Strategy.

Hertfordshire Road Safety Partnership: A partnership of organisations comprising who are responsible for delivering road safety schemes, initiatives and campaigns across the county, and supports national road safety campaigns. The Partnership comprises Hertfordshire County Council (Highways, Trading Standards, Public Health), Herts Fire and Rescue, Hertfordshire Constabulary, Herts Air Ambulance, Highways England and the Office of Police and Crime Commissioner.

Highways Locality Budget: Budget held by the county councillors to facilitate improvements on the highway within their division.

Local Transport Plan: Statutory document which sets out the overall objectives and targets for improving transport in the County. The current version is Local Transport Plan 4.

Mean Speed: The average speed at which all vehicles travel.

Police and Crime Commissioner: Works closely with the Chief Constable to reduce crime, keep communities safe and ensure the criminal justice system works well. The elected PCC has the responsibility to hold the police and the chief constable to account on behalf of the public.

Police and Crime Commissioner Road Safety Fund: A fund that uses the surplus generated from motorists who have committed driving offences and been ordered to pay court costs following prosecution, or who have attended educational diversionary courses (such as a speed awareness course), to address community concerns and fund new and innovative ways of improving road safety and changing behaviour.

Roundel: In context, a roundel is the circular disc or marking that displays the speed limit applicable to a road. Roundels are placed at appropriate intervals as road markings, normally larger and more conspicuous at the start or change of a limit.

Rural: An area not shown on the “Hertfordshire Urban Area” published data set.

Section 106 Agreement: Funding obtained from developers when building new housing and other buildings to mitigate the impact that the development has on the transport network.

Section 278 Agreement: An agreement to permit a third party to introduce permanent changes to the highway network, usually used to facilitate or connect to new development sites.

Settlement: An area shown on the “Government National Statistics Hertfordshire Census Settlements” published data set.

Speed Management Group: A group of HCC and police officers who provide advice to other HCC officers, developers and other bodies on the implementation of the Speed Management Strategy and consider changes to Speed Limits and confirm whether proposed changes are in compliance with the Speed Management Strategy.

Spatial Transport Plan: Key strategic transport document for a growth focused area within the County that identifies schemes in the area that will deliver LTP policies and objectives.

Standard Deviation: The difference between mean speed and 85th percentile speeds as shown below. This is used as method or measure to identify speeding traffic (where there is a large standard deviation), as given in the below table:

Speed Limit	20 mph	30 mph	40 mph	50mph	60 mph
Mean speeds	24 mph	30 mph	40 mph	50 mph	60 mph
85th percentile speeds	28 mph	35 mph	46 mph	57mph	68mph
Standard Deviation	4 mph	5 mph	6 mph	7 mph	8 mph

STATS 19 Form: The department for transport compiles data on personal injury collisions, resulting casualties, and the vehicles involved. The police fill in this form for each collision occurring on the public highway, and which become known to them within 30 days.

Traffic Calming Measure: Humps in accordance with the Highways (Road Hump) regulations 1999, traffic calming works in accordance with the Highways (traffic calming) regulations 1999, a pedestrian refuge designed to slow traffic, variation in widths of the carriageway for the purpose of slowing traffic constructed after 1999 and a horizontal bend as defined in TRSGD 2016.

For avoidance of doubt a traffic calming measures will alter a vehicles speed significantly if designed correctly. The spacing in TSRGD 2016 are the minimum to suffice the legal signing requirements for setting out a zone. It does not guarantee that vehicle that vehicle speeds will reduce. Traffic calming measures should be designed in accordance with LTN 1/07 and at a spacing intended to achieve the required speed reduction for the type of traffic calming measures chosen.

Traffic Regulation Order: A Traffic Regulation Order (TRO) is a legal order, which allows us the regulation of speed, movement, and parking of vehicles. They are enforced by the police, with parking restrictions enforced by local district councils.

Urban: An area shown on the “Hertfordshire Urban Area” published data set.

Variable 20mph Limit: A 20mph speed limit that is only operational at certain times of the day. Similar to that used on Smart Motorways (with varying limits).

Abbreviations and Acronyms

APCO	Association of Public Safety Communications Officials
AONB	Area of Outstanding Natural Beauty
CIL	Community Infrastructure Levy
DfT	Department for Transport
HLB	Highways Locality Budget
HADECS	Highways Agency Digital Enforcement Camera System (a type of speed camera)
KSI	Killed or Seriously Injured
LTP	Local Transport Plan
NMU	Non-motorised user
NPCC	National Police Chiefs Council
OPCC	Office of Police and Crime Commissioner
PCC	Police and Crime Commissioner
RTC	Road Traffic Collision
S106	Funding negotiated from developers to mitigate the impact of the development
SID	Speed Indication Device
SMG	Speed Management Group
SNT	Safer Neighbourhood Team
TAL	Traffic Advisory Leaflet (produced by the DfT)
TM	Traffic Management
TMO	Traffic Management Officer
TRO	Traffic Regulation Order
VAS	Vehicle Activated Sign

18.2 Appendix B – Changes between strategies

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
1	Limit and Zone Definitions, Introduction of 20mph areas as a collective term, signage requirements	A limit is a single road with a 20mph speed limit, with or without physical measures. A zone is two or more adjacent roads with a 20mph speed limit, with or without physical measures.	Limits and Zones will revert to Dft Definitions. Allowing limits to be used on multiple roads. In the strategy we will use the term collectively refer to them as 20mph Areas. In practice though we will have a mixture of limits and zones	Previously the standardisation of zones across the county led to more signs being installed than necessary. In a zone signs are required every 100m (if there are no other traffic calming measures). Whereas is if limits had been progressed, less signage would have been needed.	This resets the use of limits and zones across the county to the following principals. Where speeds are already low then a 20mph limit can be used. Where speeds need to be lowered with traffic calming then a 20mph zone can be used. Designers will be able to mix and match these principals across town to save signage costs.
2	Limit and Zone Definitions, Introduction of 20mph areas as a collective term, signage requirements	Zones (multiple roads) were signed as required by legislation (Every 100m unless traffic calming features were used). Limits (single roads) were signed by legislation every 200m.	Changes in legislation (TRSGD 2016) means that limit signage spacing is now guidance. To sign zones and limits consistently. A new criterion has been included that whether a limit or a zone there will be a speed limit sign at least every 200m.	When zones are being promoted that are traffic calmed or designed for low speed there will be an increased cost of additional signs every 200m.	This is so that public can easily identify the speed limit of a particular road. This is important when encouraging persons to use active travel modes. Past logic has been around design that if the environment caused vehicle to travel slowly then there wasn't a need to have road sign telling the driver that the speed limit. However, research has shown (Atkins et al 2018) that persons are more likely to use active travel modes if they know the speed limit is set at 20mph. Therefore, perception is an important new consideration is convincing persons to use active travel modes.
3	Place & Movement Criteria	N/A	The introduction of place and movement as a criterion for review when considering speed limit changes, including the establishment of 20mph areas as being suitable for roads with a higher place value	This will allow town wide 20mph areas to be planned and progressed, as well as providing another tool to better match speed limits with environments.	Previously officers had to identify areas then collect data to confirm which led to a piecemeal progression of 20mph zones. Use the P&M criteria to identify 20mph areas will demonstrate the commitment of 20mph in residential areas.

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
4	Speed data collection	Mean speeds will be used as the basis for setting speed limits in 20mph speed limits and zones.	Mean speeds and 85 th %tile speeds will be collected. The difference between the two will be compared to identify if there are speeding issues on any particular road that would need interventions.	Cost neutral.	Previous use of the mean only to set speed limits had missed that low means can mask speeding problems. The difference (standard deviation) indicated the spread of speeds. Ideally a low standard deviation would indicate good correlation with the mean. A high standard deviation would show greater spread of traffic speeds either side of the mean. This would indicate speeding issues.
5	Existing speeds for proposed 20mph zones without physical measures.	The following now applies: -Where at least 90% of the total number of roads in the proposed zone have existing mean speeds 25mph or below. -Where up to 10% of the total number of roads in the proposed zone have existing mean speeds above 25mph, but below 27mph.	This requirement has been removed.	In terms of having speed limits that work, this is a positive step forward. There will be increased construction cost as measures are developed for non-conforming measures.	This criteria had unforeseen effect with designers selecting roads purely on a numerical basis to trigger the 10% rule. In some cases wrong roads were selected which were not suited to 20mph without applying traffic calming. If traffic speeds are above 24mph then proportionate traffic calming is needed to slow traffic. (See Section 9.0)
6	SIDS criteria		New criteria added	N/A	Publicising process for Speed Indicating Devices.
7	The Role of the Speed Management Group	The Officers Speed Management Group will no longer assess speed limit change requests. Promoting officers will now complete the Speed Limit Change Form	SMG is now reformed. And its role is discussion in Section 14.0	More transparent process for changing speed limits.	N/A

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
8	5 Core principles	Not covered	5 core principles have been introduced to cover how HCC approaches speed management	N/A	These cover important points about setting speed limits for Hertfordshire
9	Speed limits by design	Not covered	Section 9.0 covers	This will have a positive impact on speed management.	Officers were facing increased requests to change speed limits to bring about a behaviour change. Such as to overcome a visibility problem. In general, this is not effective speed management and the new chapter sets out how to change vehicle speed to support a limit change.

Appendix C – Technical guidance on collection & interpretation of speed data

When analysing traffic speed data. It is important to look at the speeds that occur under free flow conditions, and therefore the 12 hour or 24 hour average mean and 85th percentile speeds may not be appropriate. It may be necessary to exclude peak hour data as congestion may have a significant effect on the results.

The following steps are taken to identify the roads that require a speed survey within a proposed 20mph area:

- The lead engineer visits all the 30mph roads in the proposed areas.
- Following discussions with the Traffic Management Officer at Hertfordshire Constabulary roads are identified where there is a concern that the vehicle speeds are high.
- Speed surveys are undertaken on these roads.
- Speed surveys are also undertaken in a random 25% sample of the remaining roads in the proposed area.

For example, if there were 30 roads in an area and 13 were identified as being of concern an extra 5 roads would be surveyed (25% of the 17 roads where speed wasn't a problem) and a total of 18 surveys would be required.

The use of local knowledge is important when examining the speed data particularly if events have had an effect on the data. When assessing speed limit, free- flow conditions during a typical weekday will be used as a baseline.

Free flow conditions are when vehicles are unlikely to be accelerating or braking. Measurements should not be taken near isolated sharp bends, gradients and road narrowing's.

A minimum of one weeks automated data should be collected. The full weeks data should be reviewed to establish whether there is consistency or large differences in speeds that may affect the use of mean speeds.

Queueing traffic can be identified by a large spread of speeds across all measured speeds – say from 5mph up to the mean speed if it occurs at isolated times of day i.e. at morning or evening peaks. Free flow traffic would have a smaller range.

Appendix D – Signage requirements

In general Hertfordshire County Council will erect speed limit repeater signage in accordance with the Table D1 below. Local variations may be necessary due to local obstructions or in locations of historic interest and are to be documented via Departures from Standard and agreed with the Speed Management Group. Where the regulations permit, signs can be substituted by road markings.

Table D1 Size, spacing and minimum clear visibility distances (CVD) for repeater signs

Speed limit and type of road (Notes 1 and 2)	Size of sign (mm)	Maximum distance (m) between			CVD (m)
		Consecutive signs on alternate sides of the carriage-way (Note 3)	Consecutive signs on the same side of the carriage-way	Terminal sign and first repeater	
20 mph zone*	-	100	100	50	-
20 mph	300	200	300	200	20
30 mph with street lighting	-	No repeaters	No repeaters	No repeaters	-
30 mph without street lighting	300	250	400	200	30
40 mph	300	350	500	250	40
50 mph	450	450	700	350	50
60 mph (dual carriageway)	600	500	800	400	60
National speed limit (lit single carriageway)	450	500	800	400	60
National speed limit (lit dual carriageway)	600	600	900	450	70
National speed limit (unlit road)	-	No repeaters	No repeaters	No repeaters	-

*In a 20mph zone any one point of the road must be no more than 50m from a feature as outlined in TSRGD 2016 Schedule 10 General Directions section 1. One feature in the zone must be a traffic calming measure the remainder can be repeater signs at no greater than 100m spacing.

As a Hertfordshire specific policy 20mph zones and limits have been combined into 20mph areas with a requirement for repeaters at least every 200m. This is so that 20mph zone or limits will have the same appearance from a signing point of view.

NOTE 1: street lighting or lit carriageway means “a system of carriageway lighting furnished by lamps lit by electricity placed not more than 183 metres apart. Where a road does not have a system of street lighting throughout and requires repeater signs for both the lit and unlit sections, a repeater sign should be provided at the point where the street lighting commences.

NOTE 2: Sign size, spacing and clear visibility distance for motorways, including link roads, will be the same as shown for 40 mph, 50 mph and 60 mph, as appropriate.

NOTE 3: Repeater signs need not be provided where the length of the speed limit is less than the distance shown in this column.

Appendix E – 20mph areas additional guidance

Hertfordshire County Council is bound by legislative requirements for 20mph Limits and Zones and as such all 20mph Areas will be laid out in accordance with these requirements.

To promote Hertfordshire's active travel principles, we will sign both 20mph Areas (consisting of Limits and Zones) consistently so that all are aware they are within them.

This additional guidance is to be applied by those considering 20 mph areas. Just because a particular area may have one or more of these elements it doesn't automatically mean that it is suitable for a 20mph area. The whole situation should be reviewed including the guidance of experienced practitioners as appropriate.

20mph Area General Guidelines

Potential for active travel

Research undertaken by the Transport Research Laboratory for the Department for Transport shows a strong correlation between speed of travel and risk of fatality,

RoSPA has summarised this in its *Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants*⁵

Therefore, the implementation of 20mph areas is a mechanism for encouraging safe active travel.

In line with LTP4 principles we will support 20mph areas where there is potential for active travel. Evidence has shown that persons are more likely to consider active travel with speed limits are low and as such Hertfordshire County Council will consider funding areas where there are greater chances of active travel. E.g. residential areas surrounding town centres with a high place function in the Place and Movement categorisation (P2/M1, P3/M1).

Pedestrians

Where there is evidence of high pedestrian footfall consideration should be given to a lower speed limit to reduce conflict between pedestrians and motor vehicles. This is particularly relevant where pedestrians are close to the road particularly where a footway is very narrow. For example, in historic areas which were not designed for motor traffic.

Buildings

Where buildings are close to the carriageway it creates an effect of visual narrowness which can slow vehicle speeds. The opposite effect occurs where buildings are set back such as when gardens are provided at the front. This phenomenon is discussed in Manual for Streets. The density of buildings also has an effect as high-density housing can generate higher footfall.

⁵ DC Richards (2010) *Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants*. Transport Research Laboratory. https://nacto.org/docs/usdg/relationship_between_speed_risk_fatal_injury_pedestrians_and_car_occupants_richards.pdf

This can also be thought about in respect to towns versus rural settlements. But in these occasions the Place and Movement assessment should be used as an indicator over whether the road is considered residential or not.

There are certain buildings by their nature that require special consideration, and these are described in the paragraphs below.

Schools

Schools by their nature and the vulnerability of their users require traffic to be travelling at slower speeds and as such a specific requirement is contained within the strategy for lower speed limits.

Community facilities

The presence of facilities such as community centres, churches or shopping parades. These can be areas which generate higher footfall.

Active Frontage

When buildings and footfall are combined the term active frontage is used. This means that motor traffic can be potentially slowed by interactions with adjacent uses. For example, a parade of shops where vehicles and pedestrians will be calling at could be considered an active frontage.

Environment

The environment or setting of a road can be enough to warrant a 20mph area but to evaluate this the road will need to be examined by any experienced practitioner. For the environment to contribute to slower speeds there is a combination of factors that need to be considered such as width of carriageway, vegetation, available forward visibility and the presence of on street parking.

Motor vehicle Speed

In section 4 the range of speeds that are required in a 20mph area are set out. The resultant speed is a prime criteria in the consideration of a 20mph area. And while most things are possible in terms of engineering a solution there comes a point where cost outweighs the overall benefit therefore the following is a broad guide to the speeds and the type of 20mph area that will be needed.

If mean speeds are 24mph or less then the existing environment is already suitable for a 20mph area and therefore only speed limit signs are required

If mean speeds are 30mph or less than the existing environment is likely to be suitable for a 20mph area with traffic calming.

Where 85th percentile speeds exceed 36mph the existing environment is unlikely to be suitable for a 20mph area as traffic calming is required to bring the vehicle speeds to that needed for a 30mph limit. If untreated then consideration should be given to raising the limit to 40mph

20mph area additional considerations

The following are additional considerations for 20mph areas but they are not considered criteria as they are factors or symptoms of other problems that could be tackled with different solutions.

Traffic volume

Traffic volume has a significant impact on the speed of traffic if it builds to a point when congestion is created and, in some situations, this can lead to requests for lower speed limits due to the severance issues created by high traffic volumes. Severance is caused by the inability for pedestrians to cross a road for example. Officers receiving requests for lower speed limits should check that traffic volume is not playing a part in local community concerns as lowering the speed limit is unlikely to address those concerns. Providing crossing facilities may be a more appropriate solution depending on the situation experienced.

If traffic volume is the only factor lowering vehicle speeds then outside of times when volume is high then the 20mph area is unlikely to be effective.

Collisions

The presence of collisions is not a reason alone to reduce speed limit. Collisions within a proposed area should be reviewed as these may indicate where the design of the road needs to be changed.

20mph Areas specific technical criteria

20mph Zones



The beginning and end of a zone must be indicated by terminal signing. The zone can be implemented with features and/or traffic calming measures. Traffic Regulation Order (TRO) required to be legally enforceable.

In Hertfordshire we sign 20mph zone and limits consistently. The minimum signing requirement for a 20mph zone is to have repeaters every 200m

TRSGD 2016 requires features at smaller interval than this. Therefore, if the proposed zone is made largely of traffic calming measures then additional signs will be required at no less than 200m.

If the proposed zone is largely based on signing due to the environment being largely self-enforcing then designers should either reconsider the design approach and make use of a 20mph limit which would ultimately require less signs than a 20mph zone.

20mph Limits



Signed with terminal signing at entry and exits and repeater signs at intervals only.

Traffic Regulation Order (TRO) required to be legally enforceable.

Advisory Part Time 20mph Limits Outside Schools



An advisory 20mph limit sign can be mounted with the school warning lights and school ahead warning sign. The advisory limit will be active when the lights are flashing during school operating hours. In general, this will be school drop off and pick up times.

Mean speeds must be 30mph or less before implementation. As the limit is advisory it not required to be self-enforcing whereas other 20mph limit and zones are.

An advisory limit is not enforceable by the police and does not require a traffic regulation order.

Variable 20mph Limits

Traffic authorities have powers to introduce speed limits that apply only at certain times of the day. These are similar in concept to Smart Motorways where variable speed limits apply and are indicated by variable message signing.

Specific signage would need to be authorised by DfT prior to a scheme being implemented.

TRO required to be legally enforceable.

Table E1: 20mph Areas (Differences between Zones and Limits)

20mph Speed Limit	20mph Zone	National Guidance/Legislation requirements [and interpretations]
<p>Signed by signs only</p> <p>Terminal Signs S10-2-1 (diag 670) (600mm dia plus) at start/end of limit.</p> <p>Repeater signs S10-2-1 (diag 670) (300mm) dia (every 200m)*</p> <p>Repeater signs can be substituted for roundels S10-2-9 (diag 1065)</p> <p>Sign illumination within limits are relaxed (TSRGD 2016)</p> <p>Terminal signs must be lit when with 50m of a Principal Road (A classification Road)</p>	<p>Signed by S10-12-5 (diag 674) on entry and S10-2-6 (diag 675A) on exit.</p> <p>Must have one physical traffic calming measure within the zone. Repeater signs are NOT a physical traffic calming measure.</p> <p>No one part of the zone must be more than 50m from measure as defined by TSRGD 2016. Unless cul de sac 80m or less.</p> <p>Entry signs are not classed as a traffic calming measure so first measure must be at 50m unless entry roundels are used. In practice this allows spacing every 100m.</p> <p>Sign illumination requirements with the zone are relaxed (TSRGD 2016)</p> <p>Road hump lighting requirements are relaxed in 20mph zones at the discretion of HCC Street Lighting.</p> <p>Sign requirements for traffic calming measures, humps, chicanes etc are relaxed and warning signs can be omitted.</p>	
<p>In either a limit or a zone the minimum requirement for a repeater signage shall be no less than 200m spacing.</p>	<p>In either a limit or a zone the minimum requirement for a repeater signage shall be no less than 200m spacing</p>	<p>HCC Policy</p>

20mph Area Public Consultation requirements

All consultation documents will state that a 20mph limit or zone will generally be self-enforcing with little or no police enforcement.

A clear process will be agreed with local members and stakeholders prior to consultation being undertaken setting out the response rate required and the level of mandated support that needs to be demonstrated for a scheme to progress. This would be clearly set out in any consultation material in order to ensure that people are fully informed and that schemes are appropriate and supported locally.

20mph Area monitoring

Before and After Studies:

A before and after study will be completed within one year of the limit or zone being implemented. This will include comparison of vehicle mean speeds.

If maximum mean speed “After” limits do not meet the criteria set out in the Speed Limit Framework, a review of the scheme will be required.

Appendix F – Criteria for Safety Camera Core Site Selection and Implementation

Initial qualifying criteria	Fixed safety camera sites	Mobile speed camera safety	Routes (may comprise of a number of Fixed, Mobile or an Average Speed solution)	Red-light or combined red-light safety camera
Site length requirement	Between 0.4km and 1.5km	Between 0.4km and 1.5km	Between 1.5km and 10km	Within junction from stop line to stop line in direction of travel.
Number of killed and serious injury collisions (KSI)	At least 4 KSI collisions per km in the baseline period.*	At least 2 KSI collisions per km in the baseline period.*	At least 3 KSI collisions per km (average) in the baseline period.* OR A minimum of 3 existing sites within the length.	At least 1 KSI collision within the junction in the baseline period.* Selection must be based upon a collision history of red-light running. Where speed and red light enforcement is to be combined then the fixed speed camera criteria would need to be met.
Speeds at proposed sites	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Not applicable for red light running only enforcement.

* The baseline period is the most recent three calendar years available at the time of review.

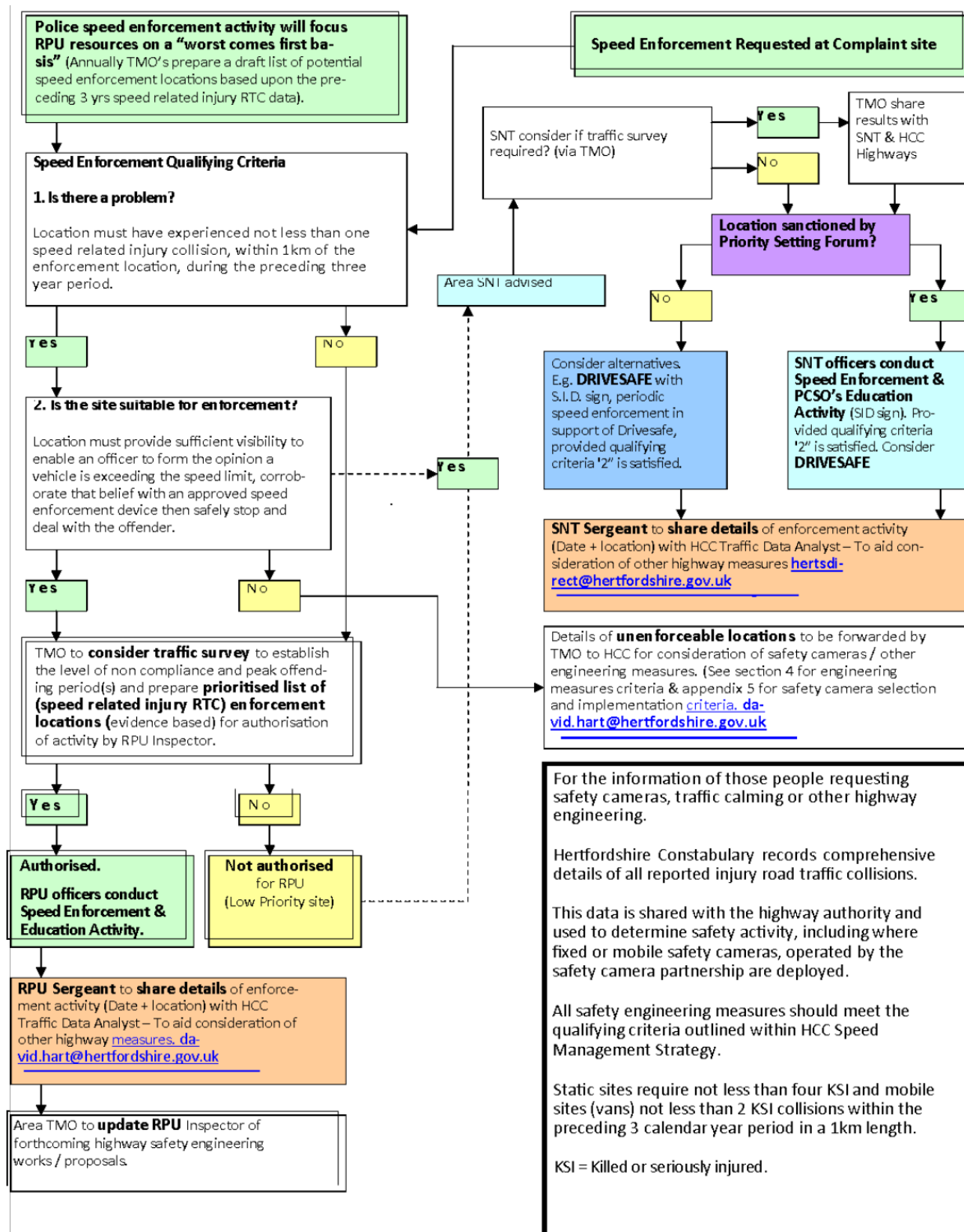
For sites that have successfully met the criteria above, then the following steps will be undertaken

Suitability of site for camera enforcement

1. Does the collision analysis indicate that safety camera enforcement would address the collision history at the location?
2. There is no other cost-effective engineering solution that is more appropriate to resolve the collision types identified as part of the collision analysis.
3. The highway authority must undertake a site survey, demonstrating the following:
 - That safety camera enforcement is the right solution.
 - That the Traffic Regulation Order (where applicable) and signing are lawful and correct.
 - That where new signage is required this can be installed safely and in compliance with relevant guidance documents.
 - That the site conditions outlined below are achievable

Rule	Site conditions that are suitable for the type of enforcement equipment
Fixed safety camera sites	Access to the camera housing is safe for operational purposes.
Mobile safety camera sites	Location for mobile enforcement is easily and safely accessible. That there is space for enforcement to take place in a visible, legal and safe manner.
Routes	Access to the camera housing is safe for operational purposes. For average systems approval in principle is required for; the structure over the highway; the proposed vehicle restraint system (where required)
Red-light or combined red-light speed	Access to the camera housing is safe for operational purposes.

Appendix G – Hertfordshire Constabulary speed enforcement guide



Appendix H – Speed limit form

Part A – to be completed prior to initial consideration by the SMG
All sections to be completed prior to submission to the SMG.
All submissions must include:
<ul style="list-style-type: none"> • Site plan • Speed data (in line with the SMS data collection framework) • Drawings of proposed speed management measures (if applicable)

Proposing officer contact details			
Name	Email	Tel No	Department
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Source of Request		Choose an item.	
Reasoning		Click or tap here to enter text.	

Site Details					
Road Name	Click or tap here to enter text.		Site code	Click or tap here to enter text.	
From	Click or tap here to enter text.	To		Length	
Town	Click or tap here to enter text.		District/Borough	Choose an item.	
County Division:			Click or tap here to enter text.		
Is the county councillor aware of the proposal?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Origin
Police Speed Enforcement site?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Speed and Environment Data					
Current speed Limit	Choose an item. mph		Proposed speed limit:	Choose an item. mph	
Place and Movement Value			P		M
Current Measured Speeds (MPH)					
Mean		85 th		Difference	
Are current speeds compliant with the proposed limit?					<input type="checkbox"/> Yes <input type="checkbox"/> No
If no, what measures are proposed to bring speeds to the required level?					
Click or tap here to enter text.					

Speed Management Group Recommendation			
Agree in principle	<input type="checkbox"/>	Reject	<input type="checkbox"/>
Reasoning			
Click or tap here to enter text.			
Date	Click or tap to enter a date.		Chair's Initials
Date for decision to be taken to STIB:		Click or tap to enter a date.	

Senior Officer & Executive Member Signoff			
The Strategic Transport Issues Board OR The Senior Officer			
Choose an item.	with the recommendation of the speed management group		
Name:	Click or tap here to enter text.	Date	Click or tap to enter a date.
The Executive Member for Highways and Environment			
Choose an item.	the recommendation of the speed management group		
Name:	Click or tap here to enter text.	Date	Click or tap to enter a date.

Part B – to be completed prior to advertising TRO
All sections to be completed prior to submission to the SMG
All submissions must include:
<ul style="list-style-type: none"> • Site plan (including measures, if appropriate) • Consultation response data

Consultation Details			
Dates of consultation			
From	Click or tap to enter a date.	To	Click or tap to enter a date.
Responses requested:		Responses received:	
For		Against	Neutral
Overall, is there support for the speed limit change?			<input type="checkbox"/> Yes <input type="checkbox"/> No
If no, what is the proposed next step?			
Click or tap here to enter text.			

Stakeholder Comments	
Police	Click or tap here to enter text.
Fire and Rescue	Click or tap here to enter text.
Ambulance	Click or tap here to enter text.
County Member	Click or tap here to enter text.
Highways Locality Manager	Click or tap here to enter text.
PTU	Click or tap here to enter text.
District/Borough Council	Click or tap here to enter text.
Parish/Town Council	Click or tap here to enter text.
Other	Click or tap here to enter text.
Other	Click or tap here to enter text.
Other	Click or tap here to enter text.

Changes to proposal		
Have any changes been made as a result of the consultation?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, please detail the changes below:		
Click or tap here to enter text.		

Proposer Sign off		
I hereby confirm that the proposals have been checked verified by a suitably experienced WCS Designer/Officer.		
I acknowledge that errors in the application will result in the application being rejected and may not be considered until the next Speed Management Group meeting (Held quarterly)		
Name	Signature	Date

Speed Management Group Recommendation		
Accept	<input type="checkbox"/>	Reject
Reasoning		

Appendix I – Frequently asked questions

Setting Local Speed Limits

Q1 What are 85th percentile and mean speeds?

85th percentile speeds are the speeds at or below 85% of all vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

Mean speeds are the average speeds that all vehicles travel at.

Q2 What is the difference between a 20mph limit and zone?

National legislation allows 20mph limits to be generally used where the existing environment encourages and therefore enforces through its nature slow speed. It will be defined by traffic signs showing the speed limit.

A 20mph zone is where the existing environment has been engineered or changed to bring about a slow speed environment. This means that as well as traffic signs showing the speed limit the area may have engineering measures e.g. humps that slow traffic down.

In Hertfordshire these have been combined into 20mph Areas with consistent signing requirements. The technical differences are explained in Appendix E Table E1

Q3 Can we have a 20mph limit or zone outside a school?

Possibly. As with considering any type of traffic calming measure, consideration first of all has to be given to whether the environment is appropriate for a 20mph limit or zone and whether existing speeds are less than 30mph.

Full details in relation to the Department for Transport Circular 01/2013 “Setting Local Speed Limits” can be found online at:

<https://www.gov.uk/government/publications/setting-local-speed-limits/setting-local-speed-limits>

Secondly, an appropriate funding source needs to be identified - either through the Local Transport Plan, S106 funding or other funding.

- The main funding source for schemes outside or near schools is through the Mode
- Share to School target in the county council's Local Transport Plan. Any scheme which
- is funded in this manner must show that it could encourage more children to walk and
- cycle to school. One of the key criteria for being considered for this funding is that the
- school has written and is implementing a School Travel Plan.
- For other funding sources see Section 15

The county council need to consider what the most effective measure(s) will be. A 20mph limit, zone, advisory limit or variable limit may be considered along with other measures.

Q4 Can I make my whole village/town 20mph?

Possibly. It would depend on the existing speeds on the area you are considering and the availability of funding to do so. The specifics of the area would need to be looked at using experts within the Highway Service and following the criteria set out in Section 5 and Appendix E.

Q5 But other areas such as Portsmouth have done it.

Yes, talking in generalities is difficult as no two situations are the same and we could create a false expectation that some is possible when it's not. But to help consider the process further here is a more detailed answer for how you could in Hertfordshire.

The Place & Movement criteria (P2/M1) (discussed in Section 4.3 and 5.2) is a good starting point to identify areas suitable for a 20mph area. From this point the normal processes to create a 20mph limit or zone would need to be applied. The P&M criteria is new for Hertfordshire and provides a better way of identifying things that match our active travel principle. As a starting point officers have identified that the categories (P2/M1 equating to residential streets) and P3/M1 (town centres) matches aspirations for 20mph areas. Other categories with a high place function may also be suitable but will need further investigation.

If all the roads in that category already have a low speed then providing the costs are met then yes, a 20mph area could be applied. Speed limits are subject to legal processes and therefore we can't say a definite yes until it has been through public consultation.

If there are roads in your area where traffic is travelling too fast then there are a couple of ways of dealing with this

- Treat the roads so traffic goes slower (See section 9 for ideas)
- Leave the speed limits on those roads at 30mph.

In all occasions it is best to look at your proposals over a plan and look at the specifics of the problem. Delivering large 20mph areas is complex and needs careful consideration for them to work.

Q6 This seems a long process. Couldn't you just change it all overnight?

We know from experience that in Hertfordshire where the wrong limits are applied to a road they are generally ignored. We want 20mph areas to work and therefore we want to follow a considered approach and the principles of Speed limits by design.

Q7 Are the views of local residents and councillors taken into account with speed limit changes?

Any change to the speed limit would require a traffic regulation order. These orders must follow a consultation process, that would allow residents, businesses, and stakeholders the opportunity to comment on proposals and seek clarification from the highway authority.

We may also undertake an engagement exercise prior to this, which will be an informal exercise to gauge the level of support for a scheme and any concerns that residents or stakeholders believe we should be aware of. The results to any consultation will be shared and considered when making a decision.

Q8 Doesn't lowering speed limits result in more pollution?

Recent studies (including by Atkins and the Transport Research Laboratory) have not conclusively proven that a reduction in speed leads to an increase in emissions. Evidence suggests that harsh behaviour – that is, rapid acceleration and braking – can lead to an increase in emissions, though not of a significant amount to be detrimental to local air quality.

Conversely, if the road environment creates a consistent speed there is unlikely to be an increase in emissions. This would suggest that careful consideration and selection is used when deploying 20mph areas, and to avoid using intermittent traffic calming that can lead to harsh behaviours

Q9 Doesn't lowering speed limits result in more congestion?

Congestion on the highway network forms when there is an obstruction ahead, or where there is insufficient capacity at a certain point to cope with demand and facilitate flow – such as at a junction, or where there is a reduction in running lanes. A reduction in vehicle speeds can, therefore, reduce the volume of vehicles that are entering a junction or obstruction zone, allowing the point to clear. This has been supported by both traffic theory and evidence from smart motorway projects, which ease congestion by introducing lower speed limits so as not to overload capacity.

Whilst, in theory, a vehicle travelling at a lower average speed would take longer to complete a journey than one making the same journey at a higher average speed, the improvements to junction queues and disruption would serve to counterbalance this.

It should also be stressed that the place and movement approach does recognise certain routes have a core function to facilitate vehicle movements, and this would be a factor in considering any speed limit change.

Engineering Measures

Q10 Can we have a vehicle activated sign?

Before vehicle activated signs are considered the Highways department must assess if the issue can be solved using traditional fixed signing.

Recorded speeds also need to be checked and must exceed the NPCC prosecution threshold speed (e.g. 35mph in a 30mph limit, 46mph in a 40mph limit).

There also need to be at least three recorded personal injury collisions that are relevant to the locations, with at least one being speed related.

Q11 Does a serious collision need to occur before action will be taken by authorities?

Although we would like to address sites where it is perceived collisions may occur, funding limitations dictate that our resources must be focused upon sites where collision resulting in injury are already occurring. However, there are other funding sources which are available to address community led concerns (e.g. the Police and Crime Commissioner Road Safety Fund)

Q12 Why does the speed limit change so many times over the length of some roads?

There are locations where relatively short speed limits have been introduced called buffer zones. These are used to bring vehicle speeds down gradually and provide better compliance within the lower speed limit. Most limits will be a minimum of 600m in length, or 400m in exceptional circumstances.

Speed Enforcement

Q13 Please can we have more speed enforcement?

Due to limited resources, the police prioritise speed enforcement activity at locations with a history of speed related collisions.

Additional speed enforcement requests can be considered for periodic attention by the ward Priority Setting Forum which meets every three months.

Q14 How can I find out about my local Priority Setting Forum?

Details, dates and locations of these panels can be ascertained by telephoning 101 or contacting the relevant Safer Neighbourhood Team. Details can be found at:

<https://www.police.uk/pu/your-area/hertfordshire-constabulary>

Q15 Who carries out speed enforcement?

The police are responsible for the enforcement of speed limits.

The county council as the Highway Authority is responsible for the management of speed on all public roads in Hertfordshire (except trunk roads and motorways which are managed by Highways England).

Q16 How do I contact my local Safer Neighbourhood Team?

Contact details can be found on Hertfordshire Constabulary's website at this location -

<https://www.police.uk/pu/your-area/hertfordshire-constabulary>

Q17 How can I access Community DriveSafe?

For further information about the Community DriveSafe scheme please visit the following web page: <https://www.hertscommissioner.org/community-drivesafe-scheme-hertfordshire>.

Safety Cameras

Q18 Can we have a safety camera?

The county council considers any location for a safety camera against the criteria in Section 12 and 'Criteria for Safety Camera Core Site Selection and Implementation' matrix.

(Appendix F)

Q19 Can we have a safety camera if we pay for it?

No, it is essential that the provision of every camera site can be justified by a logical and democratically supported process which is through the 'Criteria for Safety Camera Core Site Selection and Implementation' matrix (Appendix F). It should be noted that there are ongoing maintenance and back office costs beyond the initial cost of providing and installing a camera.

Q20 Aren't speed cameras just a means of making money from motorists?

Section 12 provides details on the nature of enforcement camera technology found on the Hertfordshire network.

Safety cameras are installed to discourage speeding where there has been a proven history of injury or death. Appendix F of the SMS includes the appropriate criteria and matrix for site selection that is used by the Hertfordshire Safety Camera Partnership

Education, Training and Publicity

Q21 How can I find out more about:

- Speed awareness courses
- The driver improvement course
- Advanced driving courses
- Motorcycling courses

Go online at [https:](https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx)

[//www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx](https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx)

Appendix J – Key Criteria Overview


Reference	Comment	Location
KC1	An assessment of the environment must be made to confirm that a speed limit is appropriate for the road. The Hertfordshire Speed Limit Framework will be used to meet this criterion	Table 2
KC2	An assessment of the place and movement function of the road will be made to determine whether the appropriate speed limit will enable the correct place and movement activity to be undertaken. The HCC Webmap layer will be used for this assessment	Table 2
KC3	For 30mph to 70mph limits, the mean speed should not exceed the proposed limit once implemented.	Table 2
KC4	Mean and 85th percentile speeds will be collected before a limit is implemented or changed. Although mean speeds will be used as the basis for setting speed limits, if there is not a consistent relationship between the 85th percentile and mean speeds (see Appendix C), the appropriateness of the existing limit will be reconsidered.	Table 2
KC5	When collecting existing speed data this should be recorded on the fastest section of road in free-flowing conditions.	Table 2
KC6	When considering a revised speed limit, the promoting officer must follow the speed limits and zones implementation process and complete a Speed Limit Change Form to ensure that all the relevant SMS criteria have been met.	Table 2
KC7	The form is to be submitted to the Speed Management Group for approval prior to consultation and again following legal advertisement	Table 2
KC8	HCC use a collective term of 20mph Areas to describe either a 20mph zone or a 20mph limit. 20mph Areas have different requirements to that found in national guidance and will always confirm to legislation. (A comparison table is contained within Appendix E)	Table 3
KC9	When collecting speed data for 20mph areas, the following will apply: The lead engineer will visit all roads in a proposed area Mean speeds will be collected in all roads where there is a concern that vehicle speeds are high Mean speeds will be collected in a random sample of other roads within the proposed area The locations of the above will be agreed with the relevant police traffic management officer With the correct judgement and experience this should avoid the need to count every road within a proposed 20mph Area.	Table 3
KC10	An assessment of the environment must be made to confirm that a 20mph speed limit is appropriate for the road(s). The Hertfordshire speed limit framework will be used to meet this criterion	Table 3

Reference	Comment	Location
KC11	20mph areas without traffic calming measures will only be considered where the existing mean speeds are 24mph or below.	Table 3
KC12	Speeds will be re-measured within one year on the roads that were surveyed before implementation, and must demonstrate that: 20mph areas have a maximum mean speed of 24mph or below once implemented, and 20mph areas are generally self-enforcing.	Table 3
KC13	Where post schemes have a mean higher than 24mph then there are two options: Reintroduce the 30mph limit in whole or part, Introduce traffic calming measures	Table 3
KC14	The 'Bus Infrastructure in Hertfordshire - Design Guide' says that if physical measures in a 20mph area are considered necessary on a bus route then the extent of these features (or length of area) should be kept to a minimum so as not to adversely affect the quality of the ride.	Table 3
KC15	Advisory 20mph limits will only be considered outside schools where existing mean speeds are 30mph or less.	Table 3
KC16	Variable 20mph limits need to be self-enforcing and have a maximum mean speed of 24mph during their times of operation. A speed limit change form will still be required.	Table 3
KC17	The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed or significant changes are made to existing school facilities	Table 3
KC18	Where new roads are designed for 20mph then a traffic regulation order is required to be progressed and funded by the promoter. This applies even if the road has been designed along principles within the 'Manual for Streets'	Table 3
KC19	The County Council may consider 40mph zonal rural speed limits subject to criteria including: The zone being self-enforcing. Mean speeds on all roads within the zone will be 40mph or less once implemented. The zone will be within a defined geographical area, e.g. bounded by A & B roads or in an AONB. The zone would have a predominantly local, access or recreational function and/or form part of a recommended network of routes for vulnerable road users. A recognised or known collision problem	Table 4
KC20-42	Engineering and design measure specific key criteria	Appendix K – Key Criteria for Engineering Measures
KC43	SIDs funded using the Highways Locality Budget (HLB), the Police and Crime	Table 7

Reference	Comment	Location
	<p>Commissioner's Road Safety Fund (PCC), or HCC core budgets must meet at least one of the following speed criteria:</p> <p>Average speed must be above the posted speed limit.</p> <p>The 85th Percentile speed must be over the National Police Chiefs' Council's (NPCC) guideline values.</p>	
KC44	SIDs funded by other sources (not HLB, PCC or HCC core budgets) are not subject to the speed criteria	Table 7
KC45	SIDs are not recommended for speed limits above 40mph	Table 7
KC46	In all cases SIDs are required to satisfy the location requirements in Table 6	Table 7
KC47	The County Council will use the 'Criteria for Safety Camera Site Selection and Implementation' matrix in Appendix F to assess the suitability and implementation of locations for safety cameras	Table 9
KC48	The County Council will continue to run and develop education, training and publicity programmes to reduce speed related collisions.	Table 10

Appendix K – Key Criteria for Engineering Measures


Speed Limit Buffer Zones (KC20 & KC21)

	<p>On the outskirts of villages/urban areas, or where there is intermittent development beyond the existing 30mph, it may be appropriate to introduce a short (400-600m) section of intermediate speed limit if immediate speed reduction causes real difficulty or is likely to be less effective.</p>
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DfT Circular 01/2013 *Setting Local Speed Limits*

<p>KC20</p>	<p>Buffer zones provide a step down where the change in limits is significant. I.e. National to 30mph or National to 20mph and where there is evidence (or it is likely based on engineering judgement) that mean speeds are likely to be higher when entering the lower limit due to the absence of a speed reducing feature.</p> <p>In some circumstances it might be appropriate to consider an intermediate speed limit of 40 mph prior to the 30-mph terminal speed limit signs at the entrance to a village, in particular where there are outlying houses beyond the village boundary or roads with high approach speeds. In this instance the choice of the buffer zone speed limit must reflect actual vehicle speeds.</p>
<p>KC21</p>	<p>DfT circular 01/2013 states that buffer zones should generally be no less than 600m. In exceptional circumstances lengths of between 400 – 600m can be considered. Advice in these instances should be sought from the Speed Management Group</p>

Speed limit countdown markers (KC22)

	<p>Countdown markers have been used on the approach to speed limit terminal signs to highlight to drivers that they are approaching a lower speed limit. Legislation does not prescribe the use of countdown markers on the approach to speed limit terminal signs.</p>
KC22	<p>Countdown markers are not be used due to lack of supporting legislation.</p>

Home Zones (KC23 – KC25)

	<p>Home Zones aim to improve the quality of life in residential roads by making them places for people, instead of just being thoroughfares for vehicles. The key elements to a Home Zone are:</p> <ul style="list-style-type: none"> • Community involvement to encourage a change in user behaviour • For the road to be designed in such a way as to allow it to be used for a range of activities and to encourage very slow vehicle speeds (usually involving sensitively designed traffic calming).
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- Transport Act 2000
- SI 2006 No. 2082 - The Quiet Lanes and Homes Zones (England) Regulations 2006
- DfT Circular 2/06 The Quiet Lanes and Home Zones (England) Regulations 2006
- LTN 1/07 Traffic Calming - Section 3.1 Shared road space
- TAL 8/02 Home Zones - Public Participation
- TAL 10/01 Home Zones - Planning and Design
- Manual for Streets

KC23	Home Zones will only be considered where mean speeds are 24mph or less.
KC24	A Home Zone will only be considered where the afternoon peak flows are less than 100 vehicles.
KC25	Due to their expense, all requests for Home Zones will be considered by the Speed Management Group

Quiet Lanes (KC26)



Quiet Lanes are minor rural roads that are appropriate for use by walkers, cyclists, horse riders and motorised users. These roads should have low levels of traffic, travelling at low speeds.

The aim of Quiet Lanes is to maintain the character of minor rural roads by seeking to contain rising traffic growth that is widespread in rural areas.

The Quiet Lanes concept involves two key elements:

- Local community engagement to encourage a change in driver behaviour.
- Area wide direction signing strategy to re-route traffic and Quiet Lane network signing.

The concept is aimed at identifying networks of minor rural roads and is not solely about addressing issues on individual roads. Where possible public rights of way should be included within these networks.

The concept is not intended as a device to traffic calm busy roads or to address issues of rat running and heavy goods vehicle movements.

- SI 2006 No. 2082 - The Quiet Lanes and Homes Zones (England) Regulations 2006
- DfT Circular 2/06 The Quiet Lanes and Home Zones (England) Regulations 2006
- LTN 1/07 Traffic Calming - Section 3.1 Shared road space.
- TAL 3/04 - Quiet Lanes

KC26	Quiet lanes are gateway features within rural areas. However, based on evidence collated from previous work (including the Hertfordshire trial), Quiet Lanes will not be implemented due to their limited success.
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Gateway and entry features (KC27 & KC28)



Gateways are used to signify the approach into a settlement or traffic calmed area. They can take many different forms, but those implemented to date have most commonly incorporated:

- a distinctive change in road surface colour or material
- a prominent sign to alert drivers to the calmed area
- 'Dragons Teeth'

Gateway features are normally used on the approach to settlements to reinforce a lower speed limit and reinforce the village identity.

An entry treatment is a form of a gateway and is usually used in urban areas. Entry treatments have been developed for use at side roads to let drivers know that they are leaving a major road and entering an area of different character, which may be a residential road. They may indicate the start of a series of traffic calming measures, or they may identify the gateway at the boundary of a 20mph zone or Home Zone.

LTN 1/07

KC27	Gateway and entry features will be only be considered as part of a package of measures to assist in the reduction of vehicle speeds.
KC28	Careful consideration will be given to material choices for gateway and entrance features in relation to future maintenance liabilities

Chicanes (KC29 & KC30)



Chicane designs vary considerably but most fall into two broad categories

- Single lane working, consisting of staggered build outs and narrowing the road so that the traffic from one direction has to give way to opposing traffic
- Two way working, using build outs to provide deflection but with lanes separated by road markings or a central island.

A single lane working chicane allows traffic flow in both directions, but there is only room for one vehicle to pass at a time. Generally, priority is given to one direction, so that the possibility of vehicle conflicts is minimised. Priority should be given to vehicles leaving a traffic-calmed area, so that the speed of vehicles entering is reduced.

Two way working chicanes require more carriageway width than single lane chicanes, as they allow two vehicles to pass in opposite directions at the same time. Where chicanes do not have a central divider, vehicles can encroach into the opposing traffic lane, and this may result in less speed reduction being achieved, and/or safety being compromised.

LTN 1/07

KC29	When using single way working, two-way vehicle flows should not exceed 3,000 vehicles per day and shall not exceed 4,000.
KC30	Chicanes can be used on roads with a speed limit of 40mph or below.

Pinch points (KC31 & KC32)




A pinch point is where the road is narrowed from both sides at the same position along the road for a distance of 5 to 10m. By implementing this measure, the carriageway width can be restricted so that only one vehicle at a time may pass, or so that two vehicles can pass slowly. Roads with a high frequency of buses and/or heavy goods vehicles need a wider carriageway width between the pinch points.

Pinch points can be used as crossing points for pedestrians, but this would prevent a cycle bypass being installed. As this measure creates conflict between vulnerable users (one's benefit is traded for another) consider alternative measures before using pinch points as pedestrian crossing points.

LTN 1/07

KC31	Pinch points will not be used in isolation to reduce vehicle speeds, only as part of a package of measures.
KC32	Pinch points will not be used in a road with a speed limit above 40mph.

Roundels and Road Marking

	<p>Road markings and roundels, as specified in the TSRGD, may serve to reinforce some elements of driver behaviour. Alone they may have a very limited impact on speed compliance (around 1-2mph), and ultimately should be secondary to the environment, but remain a measure that can be considered for installation.</p>
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- TSRGD
- LTN 1/07

Central islands and refuges (KC33)



Central islands and refuges can be installed in the middle of the carriageway to narrow the width of the traffic lanes and assist in reducing vehicle speeds. Such facilities must be accompanied by the relevant road markings.

These can create pinch points for cyclist if designed to reduce traffic speed.

LTN 1/07

KC33

Central islands and refuges will only be used as part of a package of measures in order to reduce speeds. They will not be used in isolation for the purpose of traffic calming.

Round top and flat top humps (KC34 & KC35)




A pinch point is where the road is narrowed from both sides at the same position along the road for a distance of 5 to 10m. By implementing this measure, the carriageway width can be restricted so that only one vehicle at a time may pass, or so that two vehicles can pass slowly. Roads with a high frequency of buses and/or heavy goods vehicles need a wider carriageway width between the pinch points.

Pinch points can be used as crossing points for pedestrians, but this would prevent a cycle bypass being installed. As this measure creates conflict between vulnerable users (one's benefit is traded for another) consider alternative measures before using pinch points as pedestrian crossing points.

- SI 1999 No. 1025 - The Highways (Road Humps) Regulations 1999
- LTN 1/07 Traffic Calming
- Bus Infrastructure in Hertfordshire – A Design Guide (June 2011)
- Protocol for the construction of Vertical Traffic Calming WCS-D-172

KC34	Humps shall be more than 25m from a bus stop. Speed cushions are preferred to speed tables on bus routes.
KC35	Round top humps are not permitted on bus routes and the principal (A) road network.

Cushions (KC36 & KC37)

			Cushions are favoured more commonly over road top and flat top humps
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- SI 1999 No. 1025 - The Highways (Road Humps) Regulations 1999
- LTN 1/07 Traffic Calming
- Bus Infrastructure in Hertfordshire – A Design Guide (June 2011)
- Protocol for the construction of Vertical Traffic Calming WCS-D-172


KC36	Parking restrictions may be needed near cushions on bus routes.
KC37	Cushions will be constructed in asphalt due to whole life cost of the alternatives

Sinusoidal humps

	Sinusoidal humps are type of road hump which have a less severe profile for cyclists. These have not yet been used in Hertfordshire, but we are open to discussions about their use.
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- LCDS
- LTN 1/20

Rumble strips (incl. Rumblewave) (KC38 –KC41)

 <p><small>Reading Road North</small></p>	<p>Rumble strips Rumble devices are designed to provide a vibratory and/or audible effect. They are intended to alert drivers to take greater care in advance of a hazard such as a bend or junction, and to help in reducing vehicle speeds.</p> <p>Reliance should not be placed on such traffic calming surfaces alone when seeking speed reduction.</p> <p>Rumblewave</p> <p>TRL Ltd was commissioned to develop a profile that would create noise and vibration within vehicles passing over it, but not increase noise levels significantly for those outside the vehicles.</p>
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LTN 1/07 Traffic Calming

TAL 1/05 Rumblewave Surfacing

KC38	Rumble strips should be used across the full width of the carriageway to avoid vehicles swerving to avoid them.
KC39	Rumble strips must be more than 200m from any residential property and are therefore suited to rural areas.
KC40	Rumble strips should only be used as a part of a package of measures (i.e. as part of a village gateway).
KC41	Rumblewave surfacing is not recommended due to concerns over its effectiveness and the whole life cost of the product.

Mini roundabouts (KC42)



Mini roundabouts assist in giving easier access from side roads. A mini roundabout should not be considered as a traffic calming measure in isolation and should only be considered as a package of measures.

CD116

KC42

Mini roundabouts should only be considered as a part of a package of measures to reduce vehicle speeds.

18.3 Hertfordshire - County of Opportunity

Our services include:

- Care for older people
- Libraries
- Support for schools, pupils and parents
- Fire and Rescue
- Fostering and adoption
- Support for people with disabilities
- Admission to schools
- Road maintenance and safety
- Protection for adults and children at risk
- Trading standards and consumer protection
- Household waste and recycling centres
- Support for carers

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To find out who your county councillor is and how to contact them, visit:

<https://democracy.hertfordshire.gov.uk/mgMemberIndex.aspx?bcr=1>

You can access the internet for free at any Hertfordshire library.